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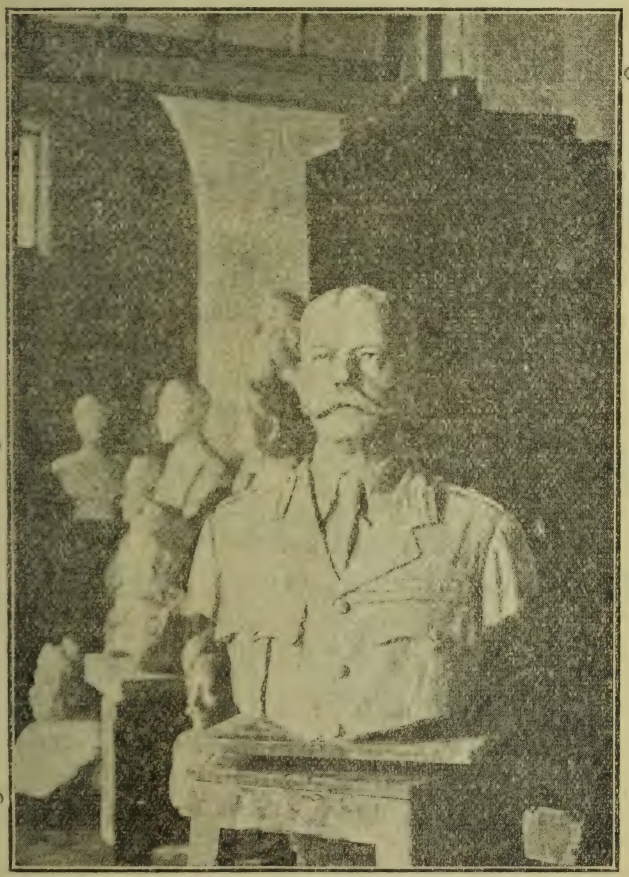
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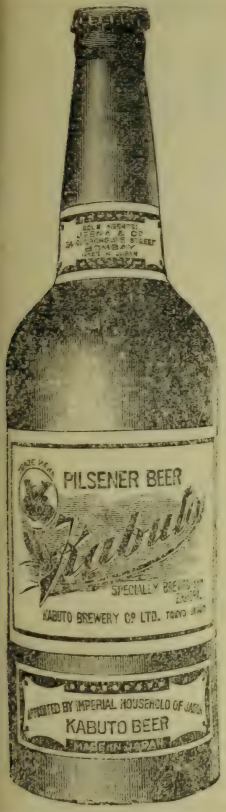
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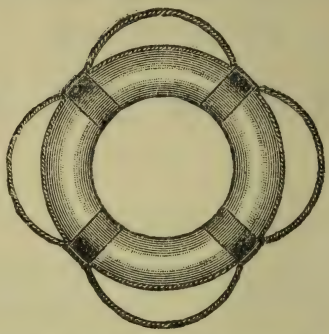
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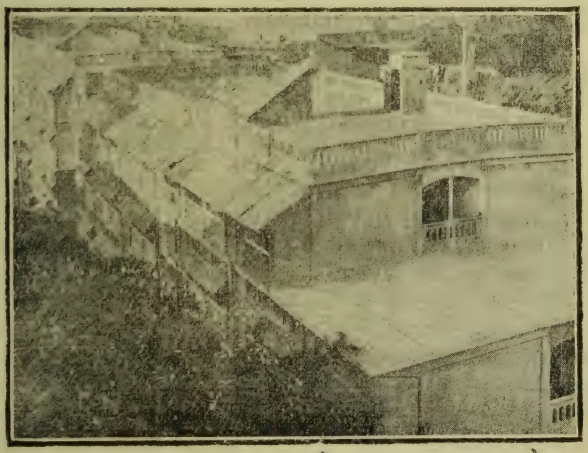
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THE

INDIAN YEAR BOOK

1919.

A STATISTICAL AND HISTORICAL ANNUAL OF
THE INDIAN EMPIRE, WITH AN
EXPLANATION OF THE
PRINCIPAL TOPICS
OF THE DAY

EDITED BY

SIR STANLEY REED, LL.D.

SIXTH YEAR OF ISSUE

PUBLISHED BY
BENNETT, COLEMAN & CO., LTD.,
THE "TIMES OF INDIA" OFFICES, BOMBAY AND CALCUTTA.
LONDON OFFICE: 187, FLEET STREET, E. C.

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In2
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PREFACE.

The fifth issue of The Indian Year Book is issued a little later than the earlier editions. For this the Editor would ask immunity. The Year Book is based so far as possible on official publications, so that there can be no question of the accuracy of the figures which it contains. The publication of the Indian Trade Review was delayed this year and, owing to the great importance of the questions dealt with in that return, which affect many sections of The Year Book, it was thought desirable to await its issue, even at the cost of disappointing readers for a few weeks.

Special attention has been given to questions arising out of the war. In some respects the information given is necessarily incomplete; for instance, the secrecy which veiled the operations of the Indian Army and the military preparations in this country has not been entirely removed. But wherever accurate information was available it is reflected in this issue, both under the general sections, and in that which deals with India and the War.

Prominence has also been given to the political questions of the day. The Report in which the Viceroy and Mr. Montagu, the Secretary of State for India, framed their proposals for the constitutional development of India is fully summarised, as also the conclusions of the various conferences which considered this scheme—the special sessions of the Indian National Congress and the Moslem League; the conference of the members of the Moderate Party; and the resolutions of the Indian National Congress and of the Moslem League which were held in Delhi in December 1918.

In response to the request of several subscribers we have included in this edition a brief Indian Who's Who. This Section will be expanded in future editions as the necessary information is accumulated and war preoccupations are reduced.

The thanks of the Editor are in special measure due to the able contributors who amid the pressing work occasioned by the war have continued to give him their invaluable assistance.

420272

THE EDITOR.

CALENDAR FOR 1919.

January.

S.	...	5	12	19	26	...
M.	...	6	13	20	27	...
Tu.	...	7	14	21	28	...
W.	1	8	15	22	29	...
Th.	2	9	16	23	30	...
F.	3	10	17	24	31	...
S.	4	11	18	25	...	...

February.

S.	...	2	9	16	23	...
M.	...	3	10	17	24	...
Tu.	...	4	11	18	25	...
W.	...	5	12	19	26	...
Th.	...	6	13	20	27	...
F.	...	7	14	21	28	...
S.	1	8	15	22	...	...

March.

S.	...	2	9	16	23	30
M.	...	3	10	17	24	31
Tu.	...	4	11	18	25	...
W.	...	5	12	19	26	...
Th.	...	6	13	20	27	...
F.	...	7	14	21	28	...
S.	1	8	15	22	29	...

April.

S.	...	6	13	20	27	...
M.	...	7	14	21	28	...
Tu.	1	8	15	22	29	...
W.	2	9	16	23	30	...
Th.	3	10	17	24	...	...
F.	4	11	18	25	...	...
S.	5	12	19	26	...	...

May.

S.	...	4	11	18	25	...
M.	...	5	12	19	26	...
Tu.	...	6	13	20	27	...
W.	...	7	14	21	28	...
Th.	1	8	15	22	29	...
F.	2	9	16	23	30	...
S.	3	10	17	24	31	...

June.

S.	1	8	15	22	29	...
M.	2	9	16	23	30	...
Tu.	3	10	17	24	...	...
W.	4	11	18	25	...	...
Th.	5	12	19	26	...	...
F.	6	13	20	27	...	...
S.	7	14	21	28	...	...

July.

S.	...	6	13	20	27	...
M.	...	7	14	21	28	...
Tu.	1	8	15	22	29	...
W.	2	9	16	23	30	...
Th.	3	10	17	24	31	...
F.	4	11	18	25	...	...
S.	5	12	19	26	...	...

August.

S.	...	3	10	17	24	31
M.	...	4	11	18	25	...
Tu.	...	5	12	19	26	...
W.	...	6	13	20	27	...
Th.	...	7	14	21	28	...
F.	1	8	15	22	29	...
S.	2	9	16	23	30	...

September.

S.	...	7	14	21	28	...
M.	1	8	15	22	29	...
Tu.	2	9	16	23	30	...
W.	3	10	17	24	...	...
Th.	4	11	18	25	...	...
F.	5	12	19	26	...	...
S.	6	13	20	27	...	

October.

S.	..	5	12	19	26	...
M.	...	6	13	20	27	...
Tu.	...	7	14	21	28	...
W.	1	8	15	22	29	...
Th.	2	9	16	23	30	...
F.	3	10	17	24	31	...
S.	4	11	18	25	...	...

November.

S.	..	2	9	16	23	30
M.	...	3	10	17	24	...
Tu.	...	4	11	18	25	...
W.	...	5	12	19	26	...
Th.	...	6	13	20	27	...
F.	...	7	14	21	28	...
S.	1	8	15	22	29	...

December.

S.	...	7	14	21	28	...
M.	1	8	15	22	29	...
Tu.	2	9	16	23	30	...
W.	3	10	17	24	31	...
Th.	4	11	18	25	...	...
F.	5	12	19	26	...	...
S.	6	13	20	27	...	...

Phases of the Moon—JANUARY 31 Days.

● New Moon ..... 2nd, 1h. 54·1 P.M. | ○ Full Moon. ..... 16th, 2h. 14·4 P.M.

☽ First Quarter ..... 9th, 4h. 25·2 P.M. | ☾ Last Quarter .... 24th, 9h. 52·0 A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H.	M.	H.	M.	H. P.M.	M.	D.	° S. ′
Wednesday ..	1	1	7	12	6	12	0	42	28·66	23 5
Thursday ..	2	2	7	12	6	13	0	42	29·95	23 0
Friday ..	3	3	7	13	6	13	0	43	0·95	22 55
Saturday ..	4	4	7	13	6	14	0	43	1·95	22 50
Sunday ..	5	5	7	13	6	15	0	44	2·95	22 43
Monday ..	6	6	7	13	6	15	0	44	3·95	22 37
Tuesday ..	7	7	7	14	6	16	0	45	4·95	22 30
Wednesday ..	8	8	7	14	6	17	0	45	5·95	22 22
Thursday ..	9	9	7	14	6	17	0	45	6·95	22 15
Friday ..	10	10	7	14	6	18	0	46	7·95	22 6
Saturday ..	11	11	7	14	6	18	0	46	8·95	21 58
Sunday ..	12	12	7	15	6	19	0	47	9·95	21 48
Monday ..	13	13	7	15	6	20	0	47	10·95	21 39
Tuesday ..	14	14	7	15	6	21	0	48	11·95	21 29
Wednesday ..	15	15	7	15	6	22	0	48	12·95	21 18
Thursday ..	16	16	7	15	6	22	0	48	13·95	21 8
Friday ..	17	17	7	15	6	23	0	49	14·95	20 56
Saturday ..	18	18	7	15	6	24	0	49	15·95	20 45
Sunday ..	19	19	7	15	6	24	0	49	16·95	20 23
Monday ..	20	20	7	15	6	25	0	50	17·95	20 20
Tuesday ..	21	21	7	15	6	25	0	50	18·95	20 7
Wednesday ..	22	22	7	15	6	26	0	50	19·95	19 54
Thursday ..	23	23	7	15	6	27	0	50	20·95	19 41
Friday ..	24	24	7	15	6	27	0	51	21·95	19 27
Saturday ..	25	25	7	15	6	28	0	51	22·95	19 12
Sunday ..	26	26	7	15	6	29	0	51	23·95	18 58
Monday ..	27	27	7	15	6	29	0	51	24·95	18 43
Tuesday ..	28	28	7	14	6	29	0	52	25·95	18 28
Wednesday ..	29	29	7	14	6	30	0	52	26·95	18 12
Thursday ..	30	30	7	14	6	30	0	52	27·95	17 56
Friday ..	31	31	7	14	6	31	0	52	28·95	17 40

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Phases of the Moon—FEBRUARY 28 Days.

● New Moon ..... 1st, 4h. 37·0m. A.M. | ○ Full Moon .... 15th, 6h. 8·2m. A.M.

☽ First Quarter..... 8th, 0h. 22·3m. A.M. | ☾ Last Quarter .. 22rd, 7h. 17·7m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H.	M.	H	M.	H. P.	M.	D.	° S. ′
Saturday ..	1	32	7	13	6	31	0	52	0·34	17 23
Sunday ..	2	33	7	13	6	32	0	53	1·34	17 7
Monday ..	3	34	7	13	6	32	0	53	2·34	16 49
Tuesday ...	4	35	7	12	6	33	0	53	3·34	16 32
Wednesday .		36	7	12	6	34	0	53	4·34	16 14
Thursday .	6	37	7	12	6	34	0	53	5·34	16 56
Friday ..	7	38	7	11	6	35	0	53	6·34	15 38
Saturday ..	8	39	7	11	6	35	0	53	7·34	15 19
Sunday ..	9	40	7	10	6	36	0	53	8·34	15 0
Monday ..	10	41	7	10	6	36	0	53	9·34	14 41
Tuesday ..	11	42	7	10	6	37	0	53	10·34	14 22
Wednesday ..	12	43	7	9	6	37	0	53	11·34	14 2
Thursday ..	13	44	7	9	6	38	0	53	12·34	13 42
Friday ..	14	45	7	8	6	38	0	53	13·34	13 22
Saturday ..	15	46	7	7	6	39	0	53	14·34	13 2
Sunday ..	16	47	7	7	6	39	0	53	15·34	12 41
Monday ..	17	48	7	6	6	40	0	53	16·34	12 21
Tuesday ..	18	49	7	5	6	40	0	53	17·34	12 0
Wednesday ..	19	50	7	5	6	40	0	53	18·34	11 39
Thursday ..	20	51	7	4	6	41	0	53	19·34	11 17
Friday ..	21	52	7	4	6	41	0	53	20·34	10 56
Saturday ..	22	53	7	3	6	41	0	53	21·34	10 34
Sunday ..	23	54	7	2	6	42	0	52	22·34	10 12
Monday ..	24	55	7	2	6	42	0	52	23·34	9 51
Tuesday ..	25	56	7	1	6	42	0	52	24·34	9 28
Wednesday ..	26	57	7	1	6	43	0	51	25·34	9 6
Thursday ..	27	58	7	0	6	43	0	51	26·34	8 44
Friday ..	28	59	7	0	6	44	0	51	27·34	8 21

Phases of the Moon—MARCH 31 Days.

● New Moon ..... 2nd, 4h. 41·4m. P.M. | ○ Full Moon ..... 16th, 9h. 11·1m. P.M.

☽ First Quarter .... 9th, 8h. 44·1m. A.M. | ☾ Last Quarter .... 25th, 2h. 3·9m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.	Mean Time. Sunset. P.M.	Mean Time. True Noon.	Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H. M.	H. M.	H. M. P.	D.	S. °
Saturday ..	1	60	6 59	6 44	0 51	28·34	7 59
Sunday ..	2	61	6 58	6 45	0 51	29·34	7 36
Monday ..	3	62	6 57	6 45	0 51	0·83	7 13
Tuesday ..	4	63	6 56	6 45	0 51	1·83	6 50
Wednesday ..	5	64	6 56	6 46	0 51	2·83	6 27
Thursday ..	6	65	6 55	6 46	0 50	3·83	6 4
Friday ..	7	66	6 54	6 47	0 50	4·83	5 41
Saturday ..	8	67	6 53	6 47	0 50	5·83	5 17
Sunday ..	9	68	6 53	6 47	0 50	6·83	4 54
Monday ..	10	69	6 52	6 48	0 49	7·83	4 31
Tuesday ..	11	70	6 51	6 48	0 49	8·83	4 7
Wednesday ..	12	71	6 50	6 48	0 49	9·83	3 44
Thursday ..	13	72	6 49	6 48	0 49	10·83	3 20
Friday ..	14	73	6 49	6 49	0 48	11·83	2 56
Saturday ..	15	74	6 48	6 49	0 48	12·83	2 33
Sunday ..	16	75	6 47	6 49	0 48	13·83	2 9
Monday ..	17	76	6 46	6 49	0 48	14·83	1 45
Tuesday ..	18	77	6 45	6 49	0 47	15·83	1 22
Wednesday ..	19	78	6 44	6 50	0 47	16·83	0 58
Thursday ..	20	79	6 43	6 50	0 47	17·83	0 34
Friday ..	21	80	6 42	6 50	0 46	18·83	0 11
Saturday ..	22	81	6 41	6 50	0 46	19·83	N 0 13
Sunday ..	23	82	6 40	6 51	0 46	20·83	0 37
Monday ..	24	83	6 39	6 51	0 45	21·83	1 0
Tuesday ..	25	84	6 39	6 51	0 45	22·83	1 24
Wednesday ..	26	85	6 39	6 51	0 45	23·83	1 48
Thursday ..	27	86	6 38	6 51	0 45	24·83	2 11
Friday ..	28	87	6 37	6 52	0 44	25·83	2 35
Saturday ..	29	88	6 36	6 52	0 44	26·85	2 58
Sunday ..	30	89	6 35	6 52	0 44	27·83	3 22
Monday ..	31	90	6 34	6 52	0 43	28·83	3 45

Phases of the Moon—APRIL 30 Days.

● New Moon ..... 1st, 2h. 34·9m. A.M.
☽ First Quarter .... 7th, 6h. 8·8m. P.M.
○ Full Moon..... 15th, 1h. 55·1m. P.M.
☾ Last Quarter .... 23rd, 4h. 51·1m. P.M.
● New Moon ..... 30th, 11h, 0·4m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			H.	M.	H.	M.	H. P.M.	M.	D.	°	N. ′
Tuesday ..	1	91	6	33	6	53	0	43	0·42	4	8
Wednesday ..	2	92	6	33	6	53	0	43	1·42	4	31
Thursday ..	3	93	6	32	6	53	0	42	2·42	4	54
Friday ..	4	94	6	31	6	53	0	42	3·42	5	17
Saturday ..	5	95	6	30	6	54	0	42	4·42	5	41
Sunday ..	6	96	6	29	6	54	0	42	5·42	6	3
Monday ..	7	97	6	28	6	54	0	41	6·42	6	26
Tuesday ..	8	98	6	28	6	54	0	41	7·42	6	49
Wednesday ..	9	99	6	27	6	54	0	41	8·42	7	11
Thursday ..	10	100	6	26	6	55	0	40	9·42	7	33
Friday ..	11	101	6	25	6	55	0	40	10·42	7	56
Saturday ..	12	102	6	24	6	55	0	40	11·42	8	18
Sunday ..	13	103	6	24	6	56	0	40	12·42	8	40
Monday ..	14	104	6	23	6	56	0	39	13·42	9	2
Tuesday ..	15	105	6	22	6	56	0	39	14·42	9	23
Wednesday ..	16	106	6	21	6	56	0	39	15·42	9	45
Thursday ..	17	107	6	21	6	57	0	38	16·42	10	6
Friday ..	18	108	6	20	6	57	0	38	17·42	10	27
Saturday ..	19	109	6	19	6	57	0	38	18·42	10	48
Sunday ..	20	110	6	19	6	57	0	38	19·42	11	9
Monday ..	21	111	6	18	6	57	0	38	20·42	11	30
Tuesday ..	22	112	6	17	6	58	0	37	21·42	11	50
Wednesday ..	23	113	6	16	6	58	0	37	22·42	12	11
Thursday ..	24	114	6	15	6	58	0	37	23·42	12	31
Friday ..	25	115	6	14	6	59	0	37	24·42	12	51
Saturday ..	26	116	6	14	6	59	0	37	25·42	13	10
Sunday ..	27	117	6	13	6	59	0	36	26·42	13	30
Monday ..	28	118	6	13	7	0	0	36	27·42	13	49
Tuesday ..	29	119	6	13	7	0	0	36	28·42	14	8
Wednesday ..	30	120	6	12	7	0	0	36	0·07	14	27

Phases of the Moon—MAY 31 Days.

☽ First Quarter.... 7th, 5h. 3·9m. A.M. | ☾ Last Quarter ....23rd, 3h. 33·9m. A.M.

○ Full Moon ..... 15th, 6h. 31·3m. A.M. | ● New Moon .....29th, 6h. 41·9m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			H.	M.	H.	M.	H. P.M.	M.	D.	°	N. ,
Thursday ..	1	121	6	11	7	1	0	36	1·07	14	45
Friday ..	2	122	6	11	7	1	0	36	2·07	15	4
Saturday ..	3	123	6	10	7	1	0	36	3·07	15	22
Sunday ..	4	124	6	10	7	2	0	36	4·07	15	40
Monday ..	5	125	6	9	7	2	0	35	5·07	15	57
Tuesday ..	6	126	6	9	7	2	0	35	6·07	16	14
Wednesday ..	7	127	6	8	7	3	0	35	7·07	16	31
Thursday ..	8	128	6	8	7	3	0	35	8·07	16	48
Friday ..	9	129	6	7	7	3	0	35	9·07	17	5
Saturday ..	10	130	6	7	7	4	0	35	10·07	17	21
Sunday ..	11	131	6	6	7	4	0	35	11·07	17	37
Monday ..	12	132	6	6	7	4	0	35	12·07	17	52
Tuesday ..	13	133	6	5	7	5	0	35	13·07	18	7
Wednesday ..	14	134	6	5	7	5	0	35	14·07	18	22
Thursday ..	15	135	6	5	7	6	0	35	15·07	18	37
Friday ..	16	136	6	4	7	6	0	35	16·07	18	51
Saturday ..	17	137	6	4	7	6	0	35	17·07	19	5
Sunday ..	18	138	6	4	7	7	0	35	18·07	19	19
Monday ..	19	139	6	3	7	7	0	35	19·07	19	32
Tuesday ..	20	140	6	3	7	7	0	35	20·07	19	46
Wednesday ..	21	141	6	3	7	8	0	35	21·07	19	58
Thursday ..	22	142	6	2	7	8	0	35	22·07	20	10
Friday ..	23	143	6	2	7	9	0	35	23·07	20	23
Saturday ..	24	144	6	2	7	9	0	35	24·07	20	34
Sunday ..	25	145	6	2	7	9	0	35	25·07	20	46
Monday ..	26	146	6	2	7	10	0	35	26·07	20	57
Tuesday ..	27	147	6	2	7	10	0	36	27·07	21	7
Wednesday ..	28	148	6	1	7	11	0	36	28·07	21	17
Thursday ..	29	149	6	1	7	11	0	36	29·07	21	27
Friday ..	30	150	6	1	7	11	0	36	0·75	21	37
Saturday ..	31	151	6	1	7	12	0	36	1·75	21	46

Phases of the Moon—JUNE 30 Days.

☽ First Quarter .... 5th, 5h. 51·9m. P.M. | ☾ Last Quarter....21st, 11h. 2·9m. A.M.

○ Full Moon .....13th, 9h. 58·2m. P.M. | ● New Moon ....28th, 2h. 22·6m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			H.	M.	H.	M.	H. P.M.	M.	D.	°	N.
Sunday ..	1	152	6	1	7	12	0	36	2·75	21	55
Monday ..	2	153	6	1	7	12	0	36	3·75	22	3
Tuesday ..	3	154	6	1	7	13	0	37	4·75	22	11
Wednesday ..	4	155	6	1	7	13	0	37	5·75	22	19
Thursday ..	5	156	6	1	7	14	0	37	6·75	22	26
Friday ..	6	157	6	1	7	14	0	37	7·75	22	33
Saturday ..	7	158	6	1	7	14	0	37	8·75	22	39
Sunday ..	8	159	6	1	7	15	0	37	9·75	22	45
Monday ..	9	160	6	1	7	15	0	38	10·75	22	51
Tuesday ..	10	161	6	1	7	15	0	38	11·75	22	56
Wednesday ..	11	162	6	1	7	16	0	38	12·75	23	1
Thursday ..	12	163	6	1	7	16	0	38	13·75	23	5
Friday ..	13	164	6	1	7	16	0	38	14·75	23	9
Saturday ..	14	165	6	1	7	17	0	39	15·75	23	13
Sunday ..	15	166	6	1	7	17	0	39	16·75	23	16
Monday ..	16	167	6	1	7	17	0	39	17·75	23	19
Tuesday ..	17	168	6	1	7	17	0	39	18·75	23	21
Wednesday ..	18	169	6	2	7	18	0	39	19·75	23	23
Thursday ..	19	170	6	2	7	18	0	40	20·75	23	25
Friday ..	20	171	6	2	7	18	0	40	21·75	23	26
Saturday ..	21	172	6	2	7	18	0	40	22·75	23	47
Sunday ..	22	173	6	3	7	19	0	40	23·75	23	27
Monday ..	23	174	6	3	7	19	0	40	24·75	23	27
Tuesday ..	24	175	6	3	7	19	0	41	25·75	23	27
Wednesday ..	25	176	6	3	7	19	0	41	26·75	23	26
Thursday ..	26	177	6	3	7	19	0	41	27·75	23	24
Friday ..	27	178	6	4	7	19	0	41	28·75	23	23
Saturday ..	28	179	6	4	7	20	0	42	0·43	23	20
Sunday ..	29	180	6	4	7	20	0	42	1·42	23	18
Monday ..	30	181	6	5	7	20	0	42	2·43	23	15

Phases of the Moon—JULY 31 Days.

☽ First Quarter .... 5th, 8h. 47·2m. A.M. | ☾ Last Quarter.....20th, 4h. 33·0m. P.M.

○ Full Moon .....13th, 11h. 32·2m. A.M. | ● New Moon .....27th, 10h. 51·4m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon. P.M.		Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			H.	M.	H.	M.	H.	M.	D.	°	N. ′
Tuesday ..	1	182	6	5	7	20	0	42	3·43	23	11
Wednesday ..	2	183	6	5	7	20	0	42	4·43	23	8
Thursday ..	3	184	6	6	7	20	0	43	5·43	23	8
Friday ..	4	185	6	6	7	20	0	43	6·43	22	59
Saturday ..	5	186	6	6	7	20	0	43	7·43	22	54
Sunday ..	6	187	6	7	7	20	0	43	8·43	22	48
Monday ..	7	188	6	7	7	20	0	43	9·43	22	43
Tuesday ..	8	189	6	7	7	20	0	43	10·43	22	36
Wednesday ..	9	190	6	8	7	20	0	44	11·43	22	30
Thursday ..	10	191	6	8	7	20	0	44	12·43	22	23
Friday ..	11	192	6	8	7	20	0	44	13·43	22	16
Saturday ..	12	193	6	8	7	20	0	44	14·43	22	8
Sunday ..	13	194	6	8	7	20	0	44	15·43	22	0
Monday ..	14	195	6	9	7	20	0	44	16·43	21	51
Tuesday ..	15	196	6	9	7	19	0	44	17·43	21	42
Wednesday ..	16	197	6	9	7	19	0	44	18·43	21	33
Thursday ..	17	198	6	10	7	19	0	45	19·43	21	24
Friday ..	18	199	6	10	7	19	0	45	20·43	21	14
Saturday ..	19	200	6	10	7	19	0	45	21·43	21	8
Sunday ..	20	201	6	11	7	18	0	45	22·43	20	58
Monday ..	21	202	6	11	7	18	0	45	23·43	20	41
Tuesday ..	22	203	6	12	7	18	0	45	24·43	20	30
Wednesday ..	23	204	6	12	7	18	0	45	25·43	20	17
Thursday ..	24	205	6	12	7	17	0	45	26·43	20	6
Friday ..	25	206	6	13	7	17	0	45	27·43	19	54
Saturday ..	26	207	6	13	7	17	0	45	28·43	19	41
Sunday ..	27	208	6	13	7	17	0	45	0·08	19	28
Monday ..	28	209	6	14	7	16	0	45	1·08	19	15
Tuesday ..	29	210	6	14	7	16	0	45	2·08	19	1
Wednesday ..	30	211	6	14	7	16	0	45	3·08	18	47
Thursday ..	31	212	6	15	7	15	0	45	4·08	18	33

Phases of the Moon—AUGUST 31 Days.

☽ First Quarter..... 4th, 1h. 41·5m. A.M. | ☾ Last Quarter ....18th, 9h. 26·1m. P.M.

○ Full Moon .....11th, 11h. 9·5m. P.M. | ● New Moon .....25th, 9h. 7·1m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			H.	M.	H.	M.	H. P.M.	M.	D.	°	N. ′
Friday ..	1	213	6	15	7	15	0	45	5·8	18	18
Saturday ..	2	214	6	15	7	14	0	45	6·8	18	8
Sunday ..	3	215	6	16	7	14	0	45	7·8	17	43
Monday ..	4	216	6	16	7	13	0	45	8·8	17	32
Tuesday ..	5	217	6	16	7	13	0	45	9·8	17	16
Wednesday ..	6	218	6	17	7	12	0	45	10·8	17	0
Thursday ..	7	219	6	17	7	12	0	44	11·8	16	44
Friday ..	8	220	6	17	7	11	0	44	12·8	16	27
Saturday ..	9	221	6	18	7	11	0	44	13·8	16	10
Sunday ..	10	222	6	18	7	10	0	44	14·8	15	53
Monday ..	11	223	6	18	7	9	0	44	15·8	15	36
Tuesday ..	12	224	6	19	7	9	0	44	16·8	15	18
Wednesday ..	13	225	6	19	7	8	0	44	17·8	15	0
Thursday ..	14	226	6	19	7	8	0	43	18·8	14	42
Friday ..	15	227	6	20	7	7	0	43	19·8	14	24
Saturday ..	16	228	6	20	7	6	0	43	20·8	14	8
Sunday ..	17	229	6	20	7	6	0	43	21·8	13	46
Monday ..	18	230	6	20	7	5	0	43	22·8	13	27
Tuesday ..	19	231	6	21	7	4	0	42	23·8	13	8
Wednesday ..	20	232	6	21	7	4	0	42	24·8	12	48
Thursday ..	21	233	6	21	7	3	0	42	25·8	12	29
Friday ..	22	234	6	21	7	2	0	42	26·8	12	9
Saturday ..	23	235	6	21	7	1	0	42	27·8	11	49
Sunday ..	24	236	6	22	7	1	0	41	28·8	11	30
Monday ..	25	237	6	22	7	0	0	41	29·8	11	8
Tuesday ..	26	238	6	22	6	59	0	41	0·65	10	43
Wednesday ..	27	239	6	22	6	59	0	40	1·65	10	27
Thursday ..	28	240	6	23	6	58	0	40	2·65	10	6
Friday ..	29	241	6	23	6	57	0	40	3·65	9	45
Saturday ..	30	242	6	23	6	56	0	40	4·65	9	24
Sunday. ..	31	243	6	23	6	55	0	39	5·65	9	2

Phases of the Moon—SEPTEMBER 30 Days.

☽ First Quarter..... 2nd, 7h. 51·9m. P.M. | ☾ Last Quarter ....17th, 3h. 1·7m. A.M.

○ Full Moon .....10th, 9h. 24·3m. A.M. | ● New Moon .....24th, 10h. 3·9m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.	Mean Time. Sunset P.M.	Mean Time. True Noon.	Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H. M.	H. M.	H. M. P.M.	D.	° N. ′
Monday ..	1	244	6 23	6 55	0 39	6·65	8 41
Tuesday ..	2	245	6 24	6 54	0 39	7·65	8 19
Wednesday ..	3	246	6 24	6 53	0 38	8·65	7 57
Thursday ..	4	247	6 24	6 52	0 38	9·65	7 35
Friday ..	5	248	6 24	6 51	0 38	10·65	7 13
Saturday ..	6	249	6 24	6 50	0 37	11·65	6 51
Sunday ..	7	250	6 25	6 50	0 37	12·65	6 28
Monday ..	8	251	6 25	6 49	0 37	13·65	6 6
Tuesday ..	9	252	6 25	6 48	0 36	14·65	5 44
Wednesday ..	10	253	6 25	6 47	0 36	15·65	5 21
Thursday ..	11	254	6 25	6 46	0 36	16·65	4 58
Friday ..	12	255	6 25	6 45	0 35	17·65	4 35
Saturday ..	13	256	6 26	6 44	0 35	18·65	4 18
Sunday ..	14	257	6 26	6 43	0 35	19·65	3 50
Monday ..	15	258	6 26	6 43	0 34	20·65	3 27
Tuesday ..	16	259	6 26	6 42	0 34	21·65	3 4
Wednesday ..	17	260	6 26	6 41	0 33	22·65	2 40
Thursday ..	18	261	6 27	6 40	0 33	23·65	2 17
Friday ..	19	262	6 27	6 39	0 33	24·65	1 54
Saturday ..	20	263	6 27	6 38	0 32	25·65	1 31
Sunday ..	21	264	6 27	6 37	0 32	26·65	1 7
Monday ..	22	265	6 27	6 36	0 32	27·65	0 44
Tuesday ..	23	266	6 27	6 36	0 31	28·65	0 21
Wednesday ..	24	267	6 28	6 35	0 31	0·11	0 12
Thursday ..	25	268	6 28	6 34	0 31	1·11	0 26
Friday ..	26	269	6 28	6 33	0 30	2·11	0 49
Saturday ..	27	270	6 28	6 32	0 30	3·11	1 13
Sunday ..	28	271	6 28	6 31	0 30	4·11	1 36
Monday ..	29	272	6 29	6 30	0 29	5·11	2 0
Tuesday ..	30	273	6 29	6 29	0 29	6·11	2 23

Phases of the Moon—OCTOBER 31 Days.

☽ First Quarter.... 2nd, 2h. 7·3m. P.M. | ☾ Last Quarter....16th, 10h. 34·7m. A.M.

○ Full Moon..... 7th, 9h. 8·6m. P.M. | ● New Moon.....24th, 2h. 9·5m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Mean Time. Sunset. P.M.		Mean Time. True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			H.	M.	H.	M.	H. P.M.	M.	D.	°	′
Wednesday ..	1	274	6	29	6	29	0	28	7·11	2	47
Thursday ..	2	275	6	29	6	28	0	28	8·11	3	10
Friday ..	3	276	6	29	6	27	0	28	9·11	3	33
Saturday ..	4	277	6	30	6	26	0	28	10·11	3	56
Sunday ..	5	278	6	30	6	25	0	27	11.11	4	21
Monday ..	6	279	6	30	6	24	0	27	12·11	4	43
Tuesday ..	7	280	6	30	6	23	0	27	13·11	5	6
Wednesday ..	8	281	6	30	6	23	0	27	14·11	5	29
Thursday ..	9	282	6	31	6	22	0	26	15·11	5	32
Friday ..	10	283	6	31	6	21	0	26	16·11	6	15
Saturday ..	11	284	6	31	6	20	0	26	17·11	6	37
Sunday ..	12	285	6	31	6	19	0	25	18·11	7	0
Monday ..	13	286	6	31	6	19	0	25	19·11	7	33
Tuesday ..	14	287	6	32	6	18	0	25	20·11	7	45
Wednesday ..	15	288	6	32	6	17	0	25	21·11	8	8
Thursday ..	16	289	6	33	6	16	0	25	22·11	8	30
Friday ..	17	290	6	33	6	16	0	24	23·11	8	52
Saturday ..	18	291	6	33	6	15	0	24	24·11	9	18
Sunday ..	19	292	6	34	6	14	0	24	25·11	9	36
Monday ..	20	293	6	34	6	14	0	24	26·11	9	58
Tuesday ..	21	294	6	34	6	13	0	24	27·11	10	20
Wednesday ..	22	295	6	34	6	12	0	23	28·11	10	41
Thursday ..	23	296	6	35	6	12	0	23	29·11	11	2
Friday ..	24	297	6	35	6	11	0	23	0·44	11	29
Saturday ..	25	298	6	36	6	10	0	23	1·44	11	45
Sunday ..	26	299	6	36	6	10	0	23	2·44	12	5
Monday ..	27	300	6	36	6	9	0	23	3·44	12	36
Tuesday ..	28	301	6	37	6	9	0	23	4·44	12	46
Wednesday ..	29	302	6	37	6	8	0	23	5·44	13	7
Thursday ..	30	303	6	37	6	7	0	23	6·44	13	27
Friday ..	31	304	6	38	6	7	0	22	7·44	13	47

Phases of the Moon—NOVEMBER 30 Days.

☽ First Quarter.... 1st, 7h. 13·2m. A.M. | ☾ Last Quarter ....14th, 9h. 10·5m. P.M.
○ Full Moon ..... 8th, 5h. 5·2m. A.M. | ● New Moon .....22nd, 8h. 47·7m. P.M.
☽ First Quarter.....30th, 19h. 16·9m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Mean Time. Sunset. P.M.		Mean Time. True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			H.	M.	H.	M.	H. P.M.	M.	D.	°	′
Saturday ..	1	305	6	38	6	6	0	22	8·44	14	6
Sunday ..	2	306	6	39	6	6	0	22	9·44	14	25
Monday ..	3	307	6	39	6	5	0	22	10·44	14	44
Tuesday ..	4	308	6	40	6	5	0	22	11·44	15	4
Wednesday ..	5	309	6	40	6	4	0	22	12·44	15	22
Thursday ..	6	310	6	41	6	4	0	22	13·44	15	41
Friday ..	7	311	6	41	6	4	0	22	14·44	15	59
Saturday ..	8	312	6	42	6	4	0	22	15·44	16	17
Sunday ..	9	313	6	42	6	3	0	23	16·44	16	34
Monday ..	10	314	6	43	6	3	0	23	17·44	16	51
Tuesday ..	11	315	6	43	6	3	0	23	18·44	17	8
Wednesday ..	12	316	6	44	6	2	0	23	19·44	17	25
Thursday ..	13	317	6	44	6	2	0	23	20·44	17	42
Friday ..	14	318	6	45	6	1	0	23	21·44	17	58
Saturday ..	15	319	6	45	6	1	0	23	22·44	18	14
Sunday ..	16	320	6	46	6	1	0	23	23·44	18	29
Monday ..	17	321	6	46	6	1	0	23	24·44	18	44
Tuesday ..	18	322	6	47	6	0	0	24	25·44	18	59
Wednesday ..	19	323	6	48	6	0	0	24	26·44	19	15
Thursday ..	20	324	6	48	6	0	0	24	27·44	19	28
Friday ..	21	325	6	49	6	0	0	24	28·44	19	42
Saturday ..	22	326	6	49	6	0	0	25	29·44	20	55
Sunday ..	23	327	6	50	6	0	0	25	0·66	20	8
Monday ..	24	328	6	51	6	0	0	25	1·66	20	21
Tuesday ..	25	329	6	51	6	0	0	25	2·66	20	33
Wednesday ..	26	330	6	52	6	0	0	26	3·66	20	45
Thursday ..	27	331	6	52	6	0	0	26	4·66	20	57
Friday ..	28	332	6	53	6	0	0	26	5·66	21	7
Saturday ..	29	333	6	54	6	0	0	27	6·66	21	19
Sunday ..	30	334	6	54	6	0	0	27	7·66	22	29

Phases of the Moon—DECEMBER 31 Days.

○ Full Moon..... 7th, 3h. 33·5m. P.M. | ● New Moon.....22nd, 4h. 25·2m. P.M.

☾ Last Quarter ....14th, 11h. 32·4m. P.M. | ☽ First Quarter ....30th, 10h. 25·0m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M. H.	M.	Sunset. P.M. H.	M.	True Noon. H. P.	M.	Moon's Age at Noon. D.	Sun's Declination at Mean Noon. °	′
Monday ..	1	335	6	55	6	0	0	28	8·66	21	39
Tuesday ..	2	336	6	55	6	0	0	28	9·66	21	49
Wednesday ..	3	337	6	56	6	0	0	28	10·66	21	58
Thursday ..	4	338	6	57	6	0	0	29	11·66	22	6
Friday ..	5	339	6	57	6	0	0	29	12·66	22	15
Saturday ..	6	340	6	58	6	1	0	30	13·66	22	23
Sunday ..	7	341	6	59	6	1	0	30	14·66	22	30
Monday ..	8	342	6	59	6	1	0	30	15·66	22	37
Tuesday ..	9	343	7	0	6	1	0	31	16·66	22	44
Wednesday ..	10	344	7	0	6	2	0	31	17·66	22	50
Thursday ..	11	345	7	1	6	2	0	32	18·66	22	55
Friday ..	12	346	7	2	6	2	0	32	19·66	23	0
Saturday ..	13	347	7	2	6	3	0	33	20·66	23	5
Sunday ..	14	348	7	3	6	3	0	33	21·66	23	10
Monday ..	15	349	7	3	6	3	0	34	22·66	23	13
Tuesday ..	16	350	7	4	6	4	0	34	23·66	23	17
Wednesday ..	17	351	7	4	6	4	0	35	24·66	23	20
Thursday ..	18	352	7	5	6	5	0	35	25·66	23	22
Friday ..	19	353	7	5	6	5	0	36	26·66	23	24
Saturday ..	20	354	7	6	6	6	0	36	27·66	23	25
Sunday ..	21	355	7	7	6	6	0	37	28·66	23	26
Monday ..	22	356	7	7	6	6	0	37	29·66	23	27
Tuesday ..	23	357	7	8	6	7	0	38	0·85	23	27
Wednesday ..	24	358	7	8	6	7	0	38	1·85	23	27
Thursday ..	25	359	7	9	6	8	0	39	2·85	23	26
Friday ..	26	360	7	9	6	9	0	39	3·85	23	24
Saturday ..	27	361	7	10	6	9	0	40	4·85	23	23
Sunday ..	28	362	7	10	6	10	0	40	5·85	23	20
Monday ..	29	363	7	11	6	10	0	41	6·85	23	18
Tuesday ..	30	364	7	11	6	11	0	41	7·85	23	14
Wednesday ..	31	365	7	11	6	11	0	42	8·85	23	11

CALENDAR FOR 1920.

January.

S.	...	4	11	18	25	...
M.	...	5	12	19	26	...
Tu.	...	6	13	20	27	...
W.	...	7	14	21	28	...
Th.	1	8	15	22	29	...
F.	2	9	16	23	30	...
S.	3	10	17	24	31	...

February.

S.	1	8	15	22	29	...
M.	2	9	16	23	...	...
Tu.	3	10	17	24	...	...
W.	4	11	18	25	...	...
Th.	5	12	19	26	...	...
F.	6	13	20	27	...	...
S.	7	14	21	28	...	...

March.

S.	...	7	14	21	28	...
M.	1	8	15	22	29	...
Tu.	2	9	16	23	30	...
W.	3	10	17	24	31	...
Th.	4	11	18	25	...	...
F.	5	12	19	26	...	...
S.	6	13	20	27	...	...

April.

S.	...	4	11	18	25	...
M.	...	5	12	19	26	...
Tu.	...	6	13	20	27	...
W.	...	7	14	21	28	...
Th.	1	8	15	22	29	...
F.	2	9	16	23	30	...
S.	3	10	17	24	...	...

May.

S.	...	2	9	16	23	30
M.	...	3	10	17	24	31
Tu.	...	4	11	18	25	...
W.	...	5	12	19	26	...
Th.	...	6	13	20	27	...
F.	...	7	14	21	28	...
S.	1	8	15	22	29	...

June.

S.	...	6	13	20	27	...
M.	...	7	14	21	28	...
Tu.	1	8	15	22	29	...
W.	2	9	16	23	30	...
Th.	3	10	17	24	...	...
F.	4	11	18	25	...	...
S.	5	12	19	26	...	...

July.

S.	...	4	11	18	25	...
M.	...	5	12	19	26	...
Tu.	...	6	13	20	27	...
W.	...	7	14	21	28	...
Th.	1	8	15	22	29	...
F.	2	9	16	23	30	...
S.	3	10	17	24	31	...

August.

S.	1	8	15	22	29	...
M.	2	9	16	23	30	...
Tu.	3	10	17	24	31	...
W.	4	11	18	25	...	...
Th.	5	12	19	26	...	...
F.	6	13	20	27	...	...
S.	7	14	21	28	...	...

September.

S.	...	5	12	19	26	...
M.	...	6	13	20	27	...
Tu.	...	7	14	21	28	...
W.	1	8	15	22	29	...
Th.	2	9	16	23	30	...
F.	3	10	17	24	...	...
S.	4	11	18	25	...	...

October.

S.	...	3	10	17	24	31
M.	...	4	11	18	25	...
Tu.	...	5	12	19	26	...
W.	...	6	13	20	27	...
Th.	...	7	14	21	28	...
F.	1	8	15	22	29	...
S.	2	9	16	23	30	...

November.

S.	...	7	14	21	28	...
M.	1	8	15	22	29	...
Tu.	2	9	16	23	30	...
W.	3	10	17	24	...	...
Th.	4	11	18	25	...	...
F.	5	12	19	26	...	...
S.	6	13	20	27	...	...

December.

S.	...	5	12	19	26	...
M.	...	6	13	20	27	...
Tu.	...	7	14	21	28	...
W.	1	8	15	22	29	...
Th.	2	9	16	23	30	...
F.	3	10	17	24	31	...
S.	4	11	18	25	...	...

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India in 1918.

The year 1918 was full of momentous events for India. The war suddenly assumed an even more intense interest for Asia. After the Brest Litovsk Treaty Germany bought the Bolshevik Government in Russia and subsidised it in order to carry the war into Central Asia and the frontiers of India. German and Turkish troops were moved into the Caucasus, with a view to the invasion of Turkestan and Afghanistan; Turkish troops advanced into north-west Persia.

The response in India was immediate. The Prime Minister of the United Kingdom called upon India to rise and meet the menace; at a Conference held in Delhi in April all classes pledged themselves to defend the country; and steps were taken to raise the Indian Army by five hundred thousand men. Recruiting was so brisk that the numbers kept ahead of the time-table; in September the Legislative Council voted part of the cost of the new armies, amounting to forty-five millions sterling; and the Indian war loan realised thirty-four millions. In this way India prepared.

With the progress of the war in other theatres the menace receded. The brilliant victories of General Allenby in Palestine, in which young Indian regiments took an honourable part, so shattered the Turkish armies that they had to call in their outlying Divisions. The defeat and capitulation of Bulgaria further forced the Turkish Government to look nearer home. Armenian irregulars threatened the communications of the Turks in north-west Persia. These developments, coupled with the continuous defeats of the German armies in the West, removed the military danger. From the stage of comparative to absolute security India passed with a suddenness which rendered the people almost incapable of appreciating it. "The sentinel at the gate," to borrow an expression used by the German newspapers, having deserted his post, it was anticipated that Turkey and Austria-Hungary would speedily capitulate. This forecast was realised and soon Germany stood alone. She held out, haggling for terms, until the last phase of the war was precipitated by the mutiny of the Fleet; on November 11 Germany accepted the armistice which was tantamount to unconditional surrender. With the full realisation that the signing of the armistice meant the end of the war, India celebrated the event with widespread rejoicings.

The problems of the peace affect India vitally; and there was immense satisfaction when it was known that she would be directly represented at the Peace Conference by two distinguished Indians, His Highness the Maharajah of Bikanir and Sir S. P. Sinha, in addition to the Secretary of the Foreign Department of the Government of India, Sir Hamilton Grant. With her very large overseas trade with Western Countries India has a vital interest in the security of the sea route to the East through the Suez Canal and down the Red Sea. Her trade in the Indian Ocean is materially affected by the future of German East Africa. There are large Indian interests in Mesopotamia, which have expanded under the stimulus of the war; confusion in Persia reacts on India and her trade. Then the seventy millions of Moslems in India, who maintained a steadfast loyalty through the difficulties caused by the entry of Turkey into the war on the side of the Central Powers, regard with intense devotion the Holy Places of Islam, Mecca and Medina. For these and other reasons, India is looking with some anxiety to the final terms of the Peace Conference.

The post-war problems of India also are not slight. The sudden cessation of hostilities found large commercial interests involved in speculations dependent for their success on the continuance of the war and on the immunity of Indian industry from the tax on excess profits which has been borne by all other belligerent countries. The reaction consequent on the determination to levy an excess profits tax for at least one year produced considerable financial confusion. The difficulties of demobilisation in India will be less than elsewhere, for a very large proportion of the army is drawn from the land and can easily return to its normal employment. But these issues have to a certain extent taken people by surprise, with the result that commercially and financially the close of the year finds the country somewhat despondent and apprehensive.

In the autumn there was published the report in which the Viceroy and the Secretary of State for India formulated their scheme for the constitutional development of the government. That scheme is summarised elsewhere. It provided for substantial provincial autonomy with the gradual transfer of all departments of the administration to the control of enlarged legislative councils; it liberalised the Government of India and proposed a bi-cameral system. Details of the franchise and the transfer of subjects to popular control were left to be worked out by committees. The scheme had a mixed reception. The Home Rule Leaguers at first sought to incite vocal opinion to reject it; the majority of men experienced in affairs welcomed it as a generous advance, whilst criticising details. Gradually the merits of the scheme made their influence felt; and the extremists passed from uncompromising rejection to qualified acceptance. The publication of the scheme produced a split in the nominal solidarity of the Indian nationalist party. The men of experience and political wisdom declined to follow the advanced Left; and first refusing to attend the sessions of the National Congress and the Moslem League which were dominated by the extremists, held in November a conference of their own, which welcomed the scheme whilst proposing the further liberalisation of the Government of India.

The long period of prosperity enjoyed by India was broken, by a considerable failure of the rains. This coupled with the high prices of all food, produced a considerable measure of distress; active steps were taken to economise the available food supplies and equitably to distribute them.

The History of India in Outline.

No history of India can be proportionate, and the briefest summary must suffer from the same defect. Even a wholesale acceptance as history of mythology, tradition, and folklore will not make good, though it makes picturesque, the many gaps that exist in the early history of India: and, though the labours of modern geographers and archæologists have been amazingly fruitful, it cannot be expected that these gaps will ever be filled to any appreciable extent. Approximate accuracy in chronology and an outline of dynastic facts are all that the student can look for up to the time of Alexander, though the briefest excursion into the by-ways of history will reveal to him many alluring and mysterious fields for speculation. There are, for example, to this day castes that believe they sprang originally from the loins of a being who landed "from an impossible boat on the shores of a highly improbable sea"; and the great epic poems contain plentiful statements equally difficult of reconciliation with modern notions of history as a science. But from the Jataka stories and the Puranas, much valuable information is to be obtained, and, for the benefit of those unable to go to these and other original sources, it has been distilled by a number of writers.

The orthodox Hindu begins the political history of India more than 3000 years before Christ, with the war waged on the banks of the Jumna between the sons of Kuru and the sons of Pandu; but the modern critic prefers to omit several of those remote centuries and to take 600 B. C., or thereabouts, as his starting point. At that time much of the country was covered with forest, but the Aryan races, who had entered India from the north, had established in parts a form of civilization far superior to that of the aboriginal savages, and to this day there survive cities, like Benares, founded by those invaders. In like manner the Dravidian invaders from an unknown land, who overran the Deccan and the Southern part of the Peninsula, crushed the aborigines, and, at a much later period, were themselves subdued by the Aryans. Of these two civilizing forces, the Aryan is the better known, and of the Aryan kingdoms the first of which there is authentic record is that of Magadha, or Bihar, on the Ganges. It was in, or near, this powerful kingdom that Jainism and Buddhism had their origin, and the fifth King of Magadha, Bimbisara by name, was the friend and patron of Gautama Buddha. The King mentioned was a contemporary of Darius, autocrat of Persia (521 to 485 B. C.) who annexed the Indus valley and formed from his conquest an Indian satrapy which paid as tribute the equivalent of about one million sterling. Detailed history, however, does not become possible until the invasion of Alexander in 326 B.C.

Alexander the Great.

That great soldier had crossed the Hindu Kush in the previous year and had captured Aornos, on the Upper Indus. In the spring of 326 he crossed the river at Ohind, received the submission of the King of Taxila, and marched against Porus who ruled the fertile country between the rivers Hydaspes (Jhelum) and Akesines (Chenab). The Macedonian carried all before him, defeating Porus at the battle of the Hydaspes, and crossing the Chenab and Ravi. But at the River Hyphasis (Bias) his weary troops mutinied, and Alexander was forced to turn back and retire to the Jhelum where a fleet to sail down the rivers to the sea was nearly ready. The wonderful story of Alexander's march through Mekran and Persia to Babylon, and of the voyage of Nearchus up the Persian Gulf is the climax to the narrative of the invasion but is not part of the history of India. Alexander had stayed nineteen months in India and left behind him officers to carry on the Government of the kingdoms he had conquered: but his death at Babylon, in 323, destroyed the fruits of what has to be regarded as nothing but a brilliant raid, and within two years his successors were obliged to leave the Indian provinces, heavily scarred by war but not hellenized.

The leader of the revolt against Alexander's generals was a young Hindu, Chandragupta who was an illegitimate member of the Royal Family of Magadha. He dethroned the ruler of that kingdom, and became so powerful that he is said to have been able to place 600,000 troops in the field against Seleucus, to whom Babylon had passed on the death of Alexander. This was too formidable an opposition to be faced, and a treaty of peace was concluded between the Syrian and Indian monarchs which left the latter the first paramount Sovereign of India (321 B. C.) with his capital at Pataliputra, the modern Patna and Bankipore. Of Chandragupta's court and administration a very full account is preserved in the fragments that remain of the history compiled by Megasthenes, the ambassador sent to India by Seleucus. His memorable reign ended in 297 B. C. when he was succeeded by his son Bindusara, who in his turn was succeeded by Asoka (269—231 B. C.) who recorded the events of his reign in numerous inscriptions. This king, in an unusually bloody war, added to his dominions the kingdom of Kalinga (the Northern Circars) and then becoming a convert to Buddhism, resolved for the future to abstain from conquest by force of arms. The consequences of the conversion of Asoka were amazing. He was not intolerant of other religions, and did not endeavour to force his creed on his "children". But he initiated measures for the propagation of his doctrine with the result that "Buddhism, which had hitherto been a merely local sect in the valley of the Ganges, was transformed into one of the greatest religions of the world—the greatest, probably, if measured by the number of adherents. This is Asoka's claim to be remembered; this it is which makes his reign an epoch, not only in the history of India, but in that of the world." The wording of his edicts reveal him as a great king as well as a great missionary, and it is to be hoped that the excavations now being carried on in the ruins of his palace may throw yet more light on his character and times. On his death the Maurya kingdom fell to pieces. Even during his reign there had been signs of new forces at work on the borderland of India, where the inde

pendent kingdoms of Bactria and Parthia had been formed, and subsequent to it there were frequent Greek raids into India. The Greeks in Bactria, however, could not withstand the overwhelming force of the westward migration of the Yueh-chi horde, which, in the first century A. D., also ousted the Indo-Parthian kings from Afghanistan and North-Western India.

The first of these Yueh-chi kings to annex a part of India was Kadphises II (A. D. 85—125), who had been defeated in a war with China, but crossed the Indus and consolidated his power eastward as far as Benares. His son Kanishka (whose date is much disputed) left a name which to Buddhists stands second only to that of Asoka. He greatly extended the boundaries of his empire in the North, and made Peshawar his capital. Under him the power of the Kushan clan of the Yueh-chi reached its zenith and did not begin to decay until the end of the second century, concurrently with the rise in middle India of the Andhra dynasty which constructed the Amaravati stupa, "one of the most elaborate and precious monuments of piety ever raised by man."

The Gupta Dynasty.

Early in the fourth century there arose; at Pataliputra, the Gupta dynasty which proved of great importance. Its founder was a local chief, his son Samudragupta, who ruled for some fifty years from A.D. 326, was a king of the greatest distinction. His aim of subduing all India was not indeed fulfilled but he was able to exact tribute from the kingdoms of the South and even from Ceylon, and, in addition to being a warrior, he was a patron of the arts and of Sanskrit literature. The rule of his son, Chandragupta, was equally distinguished and is commemorated in an inscription on the famous iron pillar near Delhi, as well as in the writings of the Chinese pilgrim Fa-hien who pays a great tribute to the equitable administration of the country. It was not until the middle of the fifth century that the fortunes of the Gupta dynasty began to wane—in face of the onset of the White Huns from Central Asia—and by 480 the dynasty had disappeared. The following century all over India was one of great confusion, apparently marked only by the rise and fall of petty kingdoms, until a monarch arose, in A.D. 606, capable of consolidating an Empire. This was the Emperor Harsha who, from Thanasar near Ambala, conquered Northern India and extended his territory South to the Nerbudda. Imitating Asoka in many ways, this Emperor yet "felt no embarrassment in paying adoration in turn to Siva, the Sun, and Buddha at a great public ceremonial." Of his times a graphic picture has been handed down in the work of a Chinese "Master of the Law," Hiuen Tsiang by name. Harsha was the last native paramount sovereign of Northern India; on his death in 648 his throne was usurped by a Minister, whose treacherous conduct towards an embassy from China was quickly avenged, and the kingdom so laboriously established lapsed into a state of internecine strife which lasted for a century and a half.

The Andhras and Rajputs.

In the meantime in Southern India the Andhras had attained to great prosperity and carried on a considerable trade with Greece, Egypt and Rome, as well as with the East. Their domination ended in the fifth century A.D. and a number of new dynasties, of which the Pallavas were the most important, began to appear. The Pallavas made way in turn for the Chalukyas, who for two centuries remained the most important Deccan dynasty, one branch uniting with the Cholas. But the fortunes of the Southern dynasties are so involved, and in many cases so little known; that to recount them briefly is impossible. Few names of note stand out from the record, except those of Vikramaditya (11th century and a few of the later Hindu rulers who made a stand against the growing power of Islam, of the rise of which an account is given below. In fact the history of mediæval India is singularly devoid of unity. Northern India was in a state of chaos from about 650 to 950 A.D. not unlike that which prevailed in Europe of that time, and materials for the history of these centuries are very scanty. In the absence of any powerful rulers the jungle began to gain back what had been wrested from it: ancient capitals fell into ruins from which in some cases they have not even yet been disturbed, and the aborigines and various foreign tribes began to assert themselves so successfully that the Aryan element was chiefly confined to the Doab and the Eastern Punjab. It is not therefore so much for the political as for the religious and social history of this anarchical period that one must look. And the greatest event—if a slow process may be called an event—of the middle ages was the transition from tribe to caste, the final disappearance of the old four-fold division of Brahmans; Kshattriyas, Vaisyas, and Sudras, and the formation of the new division of pure and impure largely resting upon a classification of occupations. But this social change was only a part of the development of the Hindu religion into a form which would include in its embrace the many barbarians and foreigners in the country who were outside it. The great political event of the period was the rise of the Rajputs as warriors in the place of the Kshattriyas. Their origin is obscure but they appeared in the 8th century and spread, from their two original homes in Rajputana and Oudh, into the Punjab, Kashmir, and the Central Himalayas, assimilating a number of fighting clans and binding them together with a common code. At this time Kashmir was a small kingdom which exercised an influence on India wholly disproportionate to its size. The only other kingdom of importance was that of Kanauj—in the Doab and Southern Oudh—which still retained some of the power to which it had reached in the days of Harsha, and of which the renown extended to China and Arabia.

With the end of the period of anarchy, the political history of India centres round the Rajputs. One clan founded the kingdom of Gujarat, another held Malwa, another (the Chauhans) founded a kingdom of which Ajmer was the capital, and so on. Kanauj fell into the hands of the Rathors (circ 1040 A.D.) and the dynasty then founded by that branch of the Gaharwars of Benares became one of the most famous in India. Later in the same century the Chauhans were united, and by

1163 one of them could boast that he had conquered all the country from the Vindhyas to the Himalayas, including Delhi already a fortress a hundred years old. The son of this conqueror was Prithwi Raj, the champion of the Hindus against the Mahomedans. With his death in battle (1192) ends the golden age of the new civilization that had been evolved out of chaos; and of the greatness of that age there is a splendid memorial in the temples and forts of the Rajput states and in the two great philosophical systems of Sankaracharya (ninth century) and Ramanuja (twelfth century). The triumph of Hinduism had been achieved, it must be added, at the expense of Buddhism, which survived only in Magadha at the time of the Mahomedan conquest and speedily disappeared there before the new faith.

Mahomedan India.

The wave of Mahomedan invaders that eventually swept over the country first touched India, in Sind, less than a hundred years after the death of the Prophet in 632. But the first real contact was in the tenth century when a Turkish slave of a Persian ruler founded a kingdom at Ghazni, between Kabul and Kandahar. A descendant of his, Mahmud (967-1030) made repeated raids into the heart of India, capturing places so far apart as Multan, Kanauj, Gwalior, and Somnath in Kathiawar, but permanently occupying only a part of the Punjab. Enduring Mahomedan rule was not established until the end of the twelfth century, by which time, from the little territory of Ghor, there had arisen one Mahomed Ghori capable of carving out a kingdom stretching from Peshawar to the Bay of Bengal. Prithwi Raj, the Chauhan ruler of Delhi and Ajmer, made a brave stand against, and once defeated, one of the armies of this ruler, but was himself defeated in the following year. Mahomed Ghori was murdered at Lahore (1206) and his vast kingdom, which had been governed by satraps, was split up into what were practically independent sovereignties. Of these satraps, Qutb-ud-din, the slave ruler of Delhi and Lahore, was the most famous, and is remembered by the great mosque he built near the modern Delhi. Between his rule and that of the Mughals, which began in 1526, only a few of the many Kings who governed and fought and built beautiful buildings, stand out with distinction. One of these was Ala-ud-din (1296-1315), whose many expeditions to the south much weakened the Hindu Kings, and who proved himself to be a capable administrator. Another was Firoz Shah, of the house of Tughlaq, whose administration was in many respects admirable, but which ended, on his abdication, in confusion. In the reign of his successor, Mahmud (1398-1413), the kingdom of Delhi went to pieces and India was for seven months at the mercy of the Turkish conqueror Taimur. It was the end of the fifteenth century before the kingdom, under Sikandar Lodi, began to recover. His son, Ibrahim, still further extended the kingdom that had been recreated, but was defeated by Babar, King of Kabul, at Panipat, near Delhi, in 1526, and there was then established in India the Mughal dynasty.

The Mahomedan dynasties that had ruled in capitals other than Delhi up to this date were of comparative unimportance, though some great men appeared among them. In Gujarat, for example, Ahmad Shah, the founder of Ahmedabad, showed himself a good ruler and builder as well as a good soldier, though his grandson, Mahmud Shah Begara, was a greater ruler—acquiring fame at sea as well as on land. In the South various kings of the Bahmani dynasty made names for themselves, especially in the long wars they waged on the new Hindu kingdom that had arisen which had its capital at Vijayanagar. Of importance also was Adil Khan, a Turk, who founded (1490) the Bijapur dynasty of Adil Shahis. It was one of his successors who crushed the Vijayanagar dynasty, and built the great mosque for which Bijapur is famous.

The Mughal Empire.

As one draws near to modern times it becomes impossible to present anything like a coherent and consecutive account of the growth of India as a whole. Detached threads in the story have to be picked up one by one and followed to their ending, and although the sixteenth century saw the first European settlements in India, it will be convenient here to continue the narrative of Mahomedan India almost to the end of the Mughal Empire. How Babar gained Delhi has already been told. His son, Humayun, greatly extended his kingdom, but was eventually defeated (1540) and driven into exile by Sher Khan, an Afghan of great capabilities, whose short reign ended in 1545. The Sur dynasty thus founded by Sher Khan lasted another ten years when Humayun having snatched Kabul from one of his brothers, was strong enough to win back part of his old kingdom. When Humayun died (1556) his eldest son, Akbar, was only 13 years old and was confronted by many rivals. Nor was Akbar well served, but his career of conquest was almost uninterrupted and by 1594 the whole of India North of the Nerbudda had bowed to his authority, and he subsequently entered the Deccan and captured Ahmednagar. This great ruler, who was as remarkable for his religious tolerance as for his military prowess, died in 1605, leaving behind him a record that has been surpassed by few. His son, Jehangir, who married the Persian lady Nur Jahan, ruled until 1627, bequeathing to an admiring posterity some notable buildings—the tomb of his father at Sikandra, part of the palace at Agra, and the palace and fortress of Lahore. His son, Shahjahan, was for many years occupied with wars in the Deccan, but found time to make his court of incredible magnificence and to build the most famous and beautiful of all tombs, the Taj Mahal, as well as the fort, palace and Juma Masjid at Delhi. The quarrels of his sons led to the deposition of Shahjahan by one of them, Aurangzeb, in 1658. This Emperor's rule was one of constant intrigue and fighting in every direction, the most important of his wars being a twenty-five years' struggle against the Marathas of the Deccan who, under the leadership of Sivaji, became a very powerful faction in Indian politics. His bigoted attitude towards Hinduism made Aurangzeb all the more anxious to establish his Empire on a firm basis in the south, but he was unable to hold his many conquests, and on his death (1707) the

Empire, for which his three sons were fighting, could not be held together. Internal disorder and Maratha encroachments continued during the reigns of his successors, and in 1739 a fresh danger appeared in the person of Nadir Shah, the Persian conqueror, who carried all before him. On his withdrawal, leaving Mahomed Shah on the throne, the old intrigues recommenced and the Marathas began to make the most of the opportunity offered to them by puppet rulers at Delhi and by almost universal discord throughout what had been the Mughal Empire. There is little to add to the history of Mahomedan India. Emperors continued to reign in name at Delhi up to the middle of the 19th century, but their territory and power had long since disappeared, being swallowed up either by the Marathas or by the British.

European Settlements.

The voyage of Vasco da Gama to India in 1498 was what turned the thoughts of the Portuguese to the formation of a great Empire in the East. That idea was soon realized, for, from 1500 onwards, constant expeditions were sent to India and the first two Viceroys in India—Almeida and Albuquerque—laid the foundations of a great Empire and of a great trade monopoly. Goa, taken in 1510, became the capital of Portuguese India and remains to this day in the hands of its captors, and the countless ruins of churches and forts on the shores of Western India, as also farther East at Malacca, testify to the zeal with which the Portuguese endeavoured to propagate their religion and to the care they took to defend their settlements. There were great soldiers and great missionaries among them—Albuquerque, da Cunha, da Castro in the former class, St. Francis Xavier in the latter. But the glory of Empire loses something of its lustre when it has to be paid for, and the constant drain of men and money from Portugal, necessitated by the attacks made on their possessions in India and Malaya, was found almost intolerable. The junction of Portugal with Spain, which lasted from 1580 to 1640, also tended to the downfall of the Eastern Empire and when Portugal became independent again, it was unequal to the task of competing in the East with the Dutch and English. The Dutch had little difficulty in wresting the greater part of their territory from the Portuguese, but the seventeenth century naval wars with England forced them to relax their hold upon the coast of India, and during the French wars between 1795 and 1811 England took all Holland's Eastern possessions, and the Dutch have left in India but few traces of their civilisation and of the once powerful East India Company of the Netherlands.

The first English attempts to reach India date from 1496 when Cabot tried to find the North-West passage, and these attempts were repeated all through the sixteenth century. The first Englishman to land in India is said to have been one Thomas Stephens (1579) who was followed by a number of merchant adventurers, but trade between the two countries really dates from 1600 when Elizabeth incorporated the East India Company which had been formed in London. Factories in India were founded only after Portuguese and Dutch opposition had been overcome, notably in the sea fight off Swally (Suvali) in 1612. The first factory, at Surat, was for many years the most important English foothold in the East. Its establishment was followed by others, including Fort St. George, Madras, (1640) and Hughli (1651). In the history of these early years of British enterprise in India the cession of Bombay (1661) as part of the dower of Catherine of Braganza stands out as a land-mark; it also illustrates the weakness of the Portuguese at that date, since in return the King of England undertook to protect the Portuguese in India against their foes—the Marathas and the Dutch. Cromwell, by his treaty of 1654, had already obtained from the Portuguese an acknowledgment of England's right to trade in the East; and that right was now threatened, not by the Portuguese, but by Sivaji and by the general disorder prevalent in India. Accordingly, in 1686, the Company turned its attention to acquiring territorial power, and announced its intention to establish such a policy of civil and military power, and create and secure such a large revenue.....as may be the foundation of a large, well-grounded, sure English dominion in India for all time to come. Not much came of this announcement for some time, and no stand could be made in Bengal against the depredations of Aurangzeb. The foundations of Calcutta (1690) could not be laid by Job Charnock until after a humiliating peace had been concluded with that Emperor, and, owing to the difficulties in which the Company found itself in England, there was little chance of any immediate change for the better. The union of the old East India Company with the new one which had been formed in rivalry to it took place in 1708, and for some years peaceful development followed; though Bombay was always exposed by sea to attacks from the pirates, who had many strongholds within easy reach of that port, and on land to attacks from the Marathas. The latter danger was felt also in Calcutta. Internal dangers were numerous and still more to be feared. More than one mutiny took place among the troops sent out from England, and rebellions like that led by Keigwin in Bombay threatened to stifle the infant settlements. The public health was bad and the rate of mortality was at times appalling. To cope with such conditions strong men were needed, and the Company was in this respect peculiarly fortunate; the long list of its servants, from Oxenden and Aungier to Hastings and Raffles, contains many names of men who proved themselves good rulers and far-sighted statesmen, the finest Empire-builders the world has known.

Attempts to compete with the English were made of course. But the schemes of the Emperor Charles VI to secure a share of the Indian trade were not much more successful than those made by Scotland, Denmark, Sweden, and Russia. By the French, who founded Pondicherry and Chandernagore towards the end of the 17th century, much more was achieved, as will be seen from the following outline of the development of British rule.

The French Wars.

When war broke out between England and France in 1744, the French had acquired a

strong position in Southern India, which had become independent of Delhi and was divided into three large States—Hyderabad, Tanjore, and Mysore—and a number of petty states under local chieftains. In the affairs of these States Dupleix, when Governor of Pondicherry, had intervened with success, and when Madras was captured by a French squadron, under La Bourdonnais (1746) Dupleix wished to hand it over to the Nawab of Arcot—a deputy of the Nizam's who ruled in the Carnatic. The French, however, kept Madras, repelling an attack by the disappointed Nawab as well as the British attempts to recapture it. The treaty of Aix-la-Chapelle restored Madras to the English. The fighting had shown the Indian powers the value of European troops, and this was again shown in the next French war (1750-54) when Clive achieved enduring fame by his capture and subsequent defence of Arcot. This war arose from Dupleix supporting candidates for the disputed successions at Arcot and Hyderabad while the English at Madras put forward their own nominees. One of Dupleix's officers, the Marquis de Bussy, persuaded the Nizam to take into his pay the army which had established his power, and in return the Northern Circars, between Orissa and Madras, was granted to the French. This territory, however, was captured by the English in the seven years' war (1756-63). Dupleix had by then been recalled to France. Lally, who had been sent to drive the English out of India, captured Fort St. David and invested Madras. But the victory which Colonel (Sir Eyre) Coote won at Wandiwash (1760) and the surrender of Pondicherry and Gingee put an end to the French ambitions of Empire in Southern India. Pondicherry passed more than once from the one nation to the other before settling down to its present existence as a French colony in miniature.

Battle of Plassey.

While the English were fighting the third French war in the South they became involved in grave difficulties in Bengal, where Siraj-ud-Daula had acceded to power. The headquarters of the English at Calcutta were threatened by that ruler who demanded they should surrender a refugee and should cease building fortifications. They refused and he marched against them with a large army. Some of the English took to their ships and made off down the river, the rest surrendered and were cast into the jail known as the "Black Hole." From this small and stifling room 23 persons, out of 146, came out alive the next day. Clive who was at Madras, immediately sailed for Calcutta with Admiral Watson's squadron, recaptured the town (1757), and, as war with the French had been proclaimed, proceeded to take Chandernagore. The Nawab Siraj-ud-Daula then took the side of the French, and Clive, putting forward Mir Jafar as candidate for the Nawab's throne, marched out with an army consisting of 900 Europeans, 2,000 sepoys and 8 pieces of artillery against the Nawab's host of over 50,000. The result was the historic battle of Plassey (June 23) in which Clive, after hesitating on the course to be pursued, routed the Nawab. Mir Jafar was put on the throne at Murshidabad, and the price of this honour was put at £ 2,340,000 in addition to the grant to the Company of the land round Calcutta now known as the District of the twenty-four Parganas. In the year after Plassey, Clive was appointed Governor of Bengal and in that capacity sent troops against the French in Madras and in person led a force against the Oudh army that was threatening Mir Jafar, in each case with success. From 1760 to 1765 Clive was in England. During his absence the Council at Calcutta deposed Mir Jafar and, for a price, put Mir Kasim in his place. This ruler moved his capital to Monghyr, organized an army, and began to intrigue with the Nawab Wazir of Oudh. He soon found, in a dispute over customs dues, an opportunity of quarrelling with the English and the first shots fired by his followers were the signal for a general rising in Bengal. About 200 Englishmen and a number of sepoys were massacred, but his trained regiments were defeated at Gheria and Oodeynullah, and Mir Kasim sought protection from the Nawab of Oudh. But in 1764, after quelling a sepoy mutiny in his own camp by blowing 24 ringleaders from the guns, Major (Sir Hector) Munro defeated the joint forces of Shah Alam, the Mughal Emperor, and the Nawab of Oudh in the battle of Buxar. In 1765 Clive (now Baron Clive of Plassey) returned as Governor. "Two landmarks stand out in his policy. First, he sought the substance, although not the name, of territorial power, under the fiction of a grant from the Mughal Emperor. Second, he desired to purify the Company's service, by prohibiting illicit gains, and by guaranteeing a reasonable pay from honest sources. In neither respect were his plans carried out by his immediate successors. But our efforts towards a sound administration date from this second Governorship of Clive, as our military supremacy dates from his victory at Plassey." Before Clive left India, in 1767, he had readjusted the divisions of Northern India and had set up a system of Government in Bengal by which the English received the revenues and maintained the army while the criminal jurisdiction was vested in the Nawab. The performance of his second task, the purification of the Company's service, was hotly opposed but carried out. He died in 1774 by his own hand, the House of Commons having in the previous year censured him, though admitting that he did render "great and meritorious services to his country."

Warren Hastings.

The dual system of government that Clive had set up proved a failure and Warren Hastings was appointed Governor, in 1772, to carry out the reforms settled by the Court of Directors which were to give them the entire care and administration of the revenues. Thus Hastings had to undertake the administrative organization of India, and, in spite of the factious attitude of Philip Francis, with whom he fought a duel and of other members of his Council, he reorganized the civil service, reformed the system of revenue collection, greatly improved the financial position of the Company, and created courts of justice and some semblance of a police force. From 1772 to 1774 he was Governor of Bengal, and from 1774 to 1775

he was the first Governor-General, nominated under an Act of Parliament passed in the previous year. His financial reforms, and the forced contributions he enacted from the rebellious Chet Singh and the Begam of Oudh, were interpreted in England as acts of oppression and formed, together with his action in the trial of Nuncomar for forgery, the basis of his seven years' trial before the House of Lords which ended in a verdict of not guilty on all the charges. But there is much more for which his administration is justly famous. The recovery of the Marathas from their defeat at Panipat was the cardinal factor that influenced his policy towards the native states. One frontier was closed against Maratha invasion by the loan of a British brigade to the Nawab Wazir of Oudh, for his war against the Rohillas, who were intriguing with the Marathas. In Western India he found himself committed to the two Maratha wars (1775-82) owing to the ambition of the Bombay Government to place its own nominee on the throne of the Peshwa at Poona, and the Bengal troops that he sent over made amends, by the conquest of Gujrat and the capture of Gwalior, for the disgrace of Wadgaon where the Marathas overpowered a Bombay army. In the South—where interference from Madras had already led (1769) to what is known as the first Mysore war, a disastrous campaign against Hyder Ali and the Nizam—he found the Madras Government again in conflict with those two potentates. The Nizam he won over by diplomacy, but against Hyder Ali he had to despatch a Bengal army under Sir Eyre Coote. Hyder Ali died in 1782 and two years later a treaty was made with his son Tipu. It was in these acts of intervention in distant provinces that Hastings showed to best advantage as a great and courageous man, cautious, but swift in action when required. He was succeeded, after an interregnum, by Lord Cornwallis (1786-93) who built on the foundations of civil administration laid by Hastings, by entrusting criminal jurisdiction to Europeans and establishing an Appellate Court of Criminal Judicature at Calcutta. In the Civil Service he separated the functions of the District Collector and Judge and organized the "writers" and "merchants" of the Company into an administrative Civil Service. This system was subsequently extended to Madras and Bombay. Lord Cornwallis is better known for his introduction, on orders from England, of the Permanent Settlement in Bengal. (See article on Land Revenue). A third Mysore war was waged during his tenure of office which ended in the submission of Tipu Sultan. Sir John Shore (Lord Teignmouth), an experienced Civil Servant, succeeded Lord Cornwallis, and, in 1798, was followed by Lord Wellesley, the friend of Pitt, whose projects were to change the map of India.

Lord Wellesley's Policy.

The French in general, and "the Corsican" in particular, were the enemy most to be dreaded for a few years before Lord Wellesley took up his duties in India, and he formed the scheme of definitively ending French schemes in Asia by placing himself at the head of a great Indian confederacy. He started by obtaining from the Nawab of Oudh the cession of large tracts of territory in lieu of payments overdue as subsidies for British troops, he then won over the Nizam to the British side, and, after exposing the intrigues of Tipu Sultan with the French, embarked on the fourth Mysore war which ended (1799) in the fall of Seringapatam and the gallant death of Tipu. Part of Mysore, the Carnatic, and Tanjore roughly constituting the Madras Presidency of to-day then passed to British rule. The five Maratha powers—the Peshwa of Poona, the Gaekwar of Baroda, Sindhia of Gwalior, Holkar of Indore and the Raja of Nagpur—had still to be brought into the British net. The Peshwa, after being defeated by Holkar, fled to British territory and signed the Treaty of Bassein which led to the third Maratha war (1802-04) as it was regarded by Sindhia and the Raja of Nagpur at a betrayal of Maratha independence. In this the most successful of British campaigns in India, Sir Arthur Wellesley (the Duke of Wellington) and General (Lord) Lake carries all before them, the one by his victories of Assaye and Argaum and the other at Aligad, and Laswari. Later operations, such as Colonel Monson's retreat through Central India were less fortunate. The great acquisitions of territory made under Lord Wellesley proved so expensive that the Court of Directors, becoming impatient, sent out Lord Cornwallis a second time to make peace at any price. He, however, died soon after his arrival in India, and Sir George Barlow carried on the government (1805-7) until the arrival of a stronger ruler, Lord Minto. He managed to keep the peace in India for six years, and to add to British dominions by the conquest of Java and Mauritius. His foreign policy was marked by another new departure, inasmuch as he opened relations with the Punjab, Persia, and Afghanistan, and concluded a treaty with Ranjit Singh, at Lahore, which made that Sikh ruler the loyal ally of the British for life.

The successor of Lord Minto was Lord Moira, who found himself obliged almost at once to declare war on the Gurkhas of Nepal, who had been encroaching on British territory. After initial reverses, the English, under General Ochterlony, were successful and the Treaty of Sagauli (1816) was drawn up which defines British relations with Nepal to the present day. For this success Lord Moira was made Marquis of Hastings. In the same year he made preparations for the last Maratha war (1817-18) which was made necessary by the lawless conduct of the Pindaris, gangs of Pathan or Rohilla origin, whose chief patrons were the rulers of Native States. The large number of 120,000 that he collected for this purpose destroyed the Pindaris, annexed the dominions of the rebellious Peshwa of Poona, protected the Rajput States, made Sindhia enter upon a new treaty, and compelled Holkar to give up part of his territory. Thus Lord Hastings established the British power more firmly than ever, and when he resigned, in 1823, all the Native States outside the Punjab had become parts of the political system and British interests were permanently secured from the Persian Gulf to Singapore. Lord Amherst followed Lord Hastings, and his five years' rule (1823-28) are memorable for the first Burmese war and the capture of Bharatpur. The former opera-

tion was undertaken owing to the insolent demands and raids of the Burmese, and resulted in the Burmese ceding Assam, Aracan, and the coast of Martaban and their claims to the lower provinces. The capture of Bharatpur by Lord Combermere (1826) wiped out the repulse which General Lake had received there twenty years earlier. A disputed succession on this occasion led to the British intervention.

Social Reform.

A former Governor of Madras, Lord William Bentinck, was the next Governor-General. His epitaph by Macaulay, says: "He abolished cruel rites; he effaced humiliating distinctions; he gave liberty to the expression of public opinion; his constant study was to elevate the intellectual and moral character of the nations committed to his charge."

Some of his financial reforms, forced on him from England, and his widening of the gates by which educated Indians could enter the service of the Company, were most unpopular at the time, but were eclipsed by the acts he took for the abolition of *Sati*, or widow-burning, and the suppression—with the help of Captain Sleeman—of the professional hereditary assassins known as *Thags*. In 1832 he annexed Cachar, and, two years later, Coorg. The incompetence of the ruler of Mysore forced him to take that State also under British administration—where it remained until 1881. His rule was marked in other ways by the despatch of the first steamship that made the passage from Bombay to Suez, and by his settlement of the long educational controversy in favour of the advocates of instruction in English and the vernaculars. Lord William Bentinck left India (1835) with his programme of reforms unfinished. The new Charter Act of 1833 had brought to a close the commercial business of the Company and emphasized their position as rulers of an Indian Empire in trust for the Crown. By it the whole administration, as well the legislation of the country, was placed in the hands of the Governor-General in Council, and authority was given to create a Presidency of Agra. Before his retirement Bentinck assumed the statutory title of Governor-General of India (1834), thus marking the progress of consolidation since Warren Hastings in 1774 became the first Governor-General of Fort William. Sir Charles Metcalfe, being senior member of Council, succeeded Lord William Bentinck, and during his short tenure of office carried into execution his predecessor's measures for giving entire liberty to the press.

Afghan Wars.

With the appointment of Lord Auckland as Governor-General (1836-42) there began a new era of war and conquest. Before leaving London he announced that he looked with exultation to the prospect of "promoting education and knowledge, and of extending the blessings of good Government and happiness to millions in India;" but his administration was almost exclusively comprised in a fatal expedition to Afghanistan, which dragged in its train the annexation of Sind, the Sikh wars, and the inclusion of Baluchistan in the protectorate of India. The first Afghan war was undertaken partly to counter the Russian advance in Central Asia and partly to place on the throne at Kabul the dethroned ruler Shah Shuja in place of Dost Mahomed. The latter object was easily attained (1839) and for two years Afghanistan remained in the military occupation of the British. In 1841 Sir Alexander Burnes was assassinated in Kabul and Sir William Macnaghten suffered the same fate in an interview with the son of Dost Mahomed. The British Commander in Kabul, Gen. Elphinstone, was old and feeble, and after two months' delay he led his army of 4,500 and 12,000 camp followers back towards India in the depth of winter. Between Kabul and Jallalabad the whole force perished, either at the hands of the Afghans or from cold, and Dr. Brydon was the only survivor who reached the latter city. Lord Ellenborough succeeded Lord Auckland and was persuaded to send an army of retribution to relieve Jallalabad. One force under Gen. Pollock relieved Jallalabad and marched on Kabul, while Gen. Nott, advancing from Kandahar, captured Ghazni and joined Pollock at Kabul (1842). The bazaar at Kabul was blown up, the prisoners rescued, and the army returned to India leaving Dost Mahomed to take undisputed possession of his throne. The drama ended with a bombastic proclamation from Lord Ellenborough and the parade through the Punjab of the (spurious) gates of Somnath taken from the tomb of Mahmud of Ghazni.

Sikh Wars.

Lord Ellenborough's other wars the conquest of Sind by Sir Charles Napier and the suppression of an outbreak in Gwalior—were followed by his recall, and the appointment of Sir Henry (1st Lord) Hardinge to be Governor-General. A soldier Governor-General was not unacceptable, for it was felt that a trial of strength was imminent between the British and the remaining Hindu power in India, the Sikhs. Ranjit Singh, the founder of the Sikh Kingdom, had died in 1839, loyal to the end to the treaty he had made with Metcalfe thirty years earlier. He left no son capable of ruling, and the *khalsa*, or central council of the Sikh army, was burning to measure its strength with the British sepoys. The intrigues of two men, Lal Singh and Fej Singh, to obtain the supreme power led to their crossing the Sutlej and invading British territory. Sir Hugh Gough, the Commander-in-Chief, and the Governor-General hurried to the frontier, and within three weeks four pitched battles were fought—at Mudki, Ferozeshah, Aliwal and Sobraon. The Sikhs were driven across the Sutlej and Lahore surrendered to the British, but the province was not annexed. By the terms of peace the infant Dhuleep Singh was recognized as Rajah; Major Henry Lawrence was appointed Resident, to assist the Sikh Council of Regency, at Lahore; the Jullundur Doab was added to British territory; the Sikh army was limited; and a British force was sent to garrison the Punjab on behalf of the child Rajah. Lord Hardinge returned to England (1848) and was succeeded by Lord Dalhousie, the greatest of Indian proconsuls.

Dalhousie had only been in India a few months when the second Sikh war broke out. In the attack on the Sikh position at Chillanwala the British lost 2,400 officers and men

besides four guns and the colours of three regiments: but before reinforcements could arrive from England, bringing Sir Charles Napier as Commander-in-Chief, Lord Gough had restored his reputation by the victory of Gujrat which absolutely destroyed the Sikh army. As a consequence the Punjab was annexed and became a British province (1849), its pacification being so well carried out, under the two Lawrences that on the outbreak of the Mutiny eight years later it remained not only quiet but loyal. In 1852 Lord Dalhousie had again to embark on war, this time in Burma, owing to the ill-treatment of British merchants in Rangoon. The lower valley of the Irawaddy was occupied from Rangoon to Prome and annexed, under the name of Pegu, to those provinces that had been acquired in the first Burmese war. British territories were enlarged in many other directions during Lord Dalhousie's tenure of office. His "doctrine of lapse" by which British rule was substituted for Indian in States where continued misrule on the failure of a dynasty made this change possible, came into practice in the cases of Satara, Jhansi, and Nagpur (which last-named State became the Central Provinces) where the rulers died without leaving male heirs. Oudh was annexed on account of its misrule. Dalhousie left many other marks on India. He reformed the administration from top to bottom, founded the Public Works Department, initiated the railways, telegraphs and postal system, and completed the great Ganges canal. He also detached the Government of Bengal from the charge of the Governor-General, and summoned representatives of the local Governments to the deliberations of the Government of India. Finally, in education he laid down the lines of a department of public instruction and initiated more practical measures than those devised by his predecessors. It was his misfortune that the mutiny, which so swiftly followed his resignation, was by many critics in England attributed to his passion for change.

The Sepoy Mutiny.

Dalhousie was succeeded by Lord Canning in 1856, and in the following year the sepoys of the Bengal army mutinied and all the valley of the Ganges from Delhi to Patna rose in rebellion. The causes of this convulsion are difficult to estimate, but are probably to be found in the unrest which followed the progress of English civilisation; in the spreading of false rumours that the whole of India was to be subdued; in the confidence the sepoy troops had acquired in themselves under British leadership; and in the ambition of the educated classes to take a greater share in the government of the country. Added to this, there was in the deposed King of Delhi, Bahadur Shah, a centre of growing disaffection. Finally there was the story—not devoid of truth—that the cartridges for the new Enfield rifle were greased with fat that rendered them unclean for both Hindus and Mahomedans. And when the mutiny did break out it found the Army without many of its best officers who were employed in civil work, and the British troops reduced; in spite of Lord Dalhousie's warnings, below the number he considered essential for safety. On May 10 the sepoys at Meerut rose in mutiny, cut down a few Europeans, and, unchecked by the large European garrison, went off to Delhi where next morning the Mahomedans rose. From that centre the mutiny spread through the North-Western Provinces and Oudh into Lower Bengal. Risings in the Punjab were put down by Sir John Lawrence and his subordinates, who armed the Sikhs, and with their help reduced the sepoys, and Lawrence was subsequently able to send a strong body of Sikhs to aid in the siege of Delhi. The native armies of Madras and Bombay remained for the most part true to their colours. In Central India, the contingents of some of the great chiefs joined the rebels, but Hyderabad was kept loyal by the influence of its minister, Sir Salar Jung.

The interest of the war centres round Delhi, Cawnpore and Lucknow, though in other places massacres and fighting occurred. The siege of Delhi began on June 8 when Sir Henry Barnard occupied the Ridge outside the town. Barnard died of cholera early in July, and Thomas Reed, who took his place, was obliged through illness to hand over the command to Archdale Wilson. In August Nicholson arrived with a reinforcement from the Punjab. In the meantime the rebel force in Delhi was constantly added to by the arrival of new bodies of mutineers; attacks were frequent and the losses heavy: cholera and sunstroke carried off many victims on the Ridge: and when the final assault was made in September the Delhi army could only parade 4,720 infantry, of whom 1,960 were Europeans. The arrival of siege guns made it possible to advance the batteries on September 8, and by the 13th a breach was made. On the following day three columns were led to the assault, a fourth being held in reserve. Over the ruins of the Kashmir Gate, blown in by Home and Salkeld, Col. Campbell led his men and Nicholson formed up his troops within the walls. By nightfall the British, with a loss of nearly 1,200 killed and wounded, had only secured a foothold in the city. Six days' street fighting followed and Delhi was won; but the gallant Nicholson was killed at the head of a storming party. Bahadur Shah was taken prisoner, and his two sons were shot by Captain Hudson.

Massacre at Cawnpore.

At Cawnpore the sepoys mutinied on June 27 and found in Nana Sahib, the heir of the last Peshwa, a willing leader in spite of his former professions of loyalty. There a European force of 240 with six guns had to protect 870 non-combatants, and held out for 22 days, surrendering only on the guarantee of the Nana that they should have a safe conduct a far as Allahabad. They were embarking on the boats on the Ganges when fire was opened on them, the men being shot or hacked to pieces before the eyes of their wives and children and the women being mutilated and murdered in Cawnpore to which place they were taken back. Their bodies were thrown down a well just before Havelock, having defeated the Nana's forces, arrived to the relief. In Lucknow a small garrison held out in the Residency from July 2 to September 25 against tremendous odds and enduring the most fearful hardships. The relieving force; under Havelock ann Outram, was itself invested, and the garrison was

not finally delivered until Sir Colin Campbell arrived in November. Fighting continued for 18 months in Oudh, which Sir Colin Campbell finally reduced, and in Central India, where Sir Hugh Rose waged a brilliant campaign against the disinherited Rani of Jhansi—who died at the head of her troops—and Tantia Topi.

Transfer to the Crown.

With the end of the mutiny there began a new era in India, strikingly marked at the outset by the Act for the Better Government of India (1858) which transferred the entire administration from the Company to the Crown. By that Act India was to be governed by, and in the name of, the Sovereign through a Secretary of State, assisted by a Council of fifteen members. At the same time the Governor-General received the title of Viceroy. The European troops of the Company, numbering about 24,000 officers and men were—greatly resenting the transfer—amalgamated with the Royal service, and the Indian Navy was abolished. On November 1, 1858, the Viceroy announced in Durbar at Allahabad that Queen Victoria had assumed the government of India, and proclaimed a policy of justice and religious toleration. A principle already enunciated in the Charter Act of 1833 was reinforced, and all, of every race or creed, were to be admitted as far as possible to those offices in the Queen's service for which they might be qualified. The aim of the Government was to be the benefit of all her subjects in India—"In their prosperity will be our strength, in their contentment our security, and in their gratitude our best reward." Peace was proclaimed in July 1859, and in the cold weather Lord Canning went on tour in the northern provinces, to receive the homage of loyal chiefs and to assure them that the "policy of lapse" was at an end. A number of other important reforms marked the closing years of Canning's Viceroyalty. The India Councils Act (1861) augmented the Governor-General's Council, and the Councils of Madras and Bombay by adding non-official members, European and Indian, for legislative purposes only. By another Act of the same year High Courts of Judicature were constituted. To deal with the increased debt of India, Mr. James Wilson was sent from England to be Financial Member of Council, and to him are due the customs system, income tax, license duty, and State paper currency. The cares of office had broken down the Viceroy's health. Lady Canning died in 1862 and this hastened his departure for England where he ied in June of that year. His successor, Lord Elgin, lived only a few months after his arrival in India, and was succeeded by Sir John (afterwards Lord) Lawrence, the "saviour of the Punjab."

Sir John Lawrence.

The chief task that fell to Sir John Lawrence was that of reorganising the Indian military system, and of reconstructing the Indian army. The latter task was carried out on the principle that in the Bengal army the proportion of Europeans to Indians in the infantry and cavalry should be one to two, and in the Madras and Bombay armies one to three: the artillery was to be almost wholly European. The re-organisation was carried out in spite of financial difficulties and the saddling of Indian revenues with the cost of a war in Abyssinia with which India had no direct concern; but operations in Bhutan were all the drain made on the army in India while the re-organising process was being carried on. Two severe famines—in Orissa (1866) and Bundelkhand and Upper Hindustan (1868-9)—occurred, while Sir John Lawrence was Viceroy, and he laid down the principle for the first time in Indian history, that the officers of the Government would be held personally responsible for taking every possible means to avert death by starvation. He also created the Irrigation Department under Col. (Sir Richard) Strachey. Two commercial crises of the time have to be noted. One seriously threatened the tea industry in Bengal. The other was the consequence of the wild gambling in shares of every description that took place in Bombay during the years of prosperity for the Indian cotton industry caused by the American Civil War. The "Share Mania," however, did no permanent harm to the trade of Bombay, but was, on the other hand, largely responsible for the series of splendid buildings begun in that city during the Governorship of Sir Bartle Frere. Sir John Lawrence retired in 1869, having passed through every grade of the service, from an Assistant Magistracy to the Viceroyalty. Lord Mayo, who succeeded him, created an Agricultural Department and introduced the system of Provincial Finance, thus fostering the impulse to local self-government. He also laid the foundation for the reform of the salt duties, thereby enabling his successors to abolish the inter-provincial customs lines. Unhappily his vast schemes for the development of the country by extending communications of every kind were not carried out to the full by him, for he was murdered in the convict settlement of the Andaman Islands, in 1872. Lord Northbrook (Viceroy 1872-6) had to exercise his abilities chiefly in the province of finance. A severe famine which threatened Lower Bengal in 1874 was successfully warded off by the organization of State relief and the importation of rice from Burma. The following year was notable for the deposition of the Gaikwar of Baroda for misgovernment, and for the tour through India of the Prince of Wales (the late King Edward VII). The visit of the Duke of Edinburgh to India when Lord Mayo was Viceroy had given great pleasure to those with whom he had come in touch, and had established a kind of personal link between India and the Crown. The Prince of Wales' tour aroused unprecedented enthusiasm for and loyalty to the British Raj, and further encouragement was given to the growth of this spirit when, in a durbar of great magnificence held on January 1st, 1877, on the famous Ridge at Delhi, Queen Victoria was proclaimed Empress of India. The Viceroy of that time, Lord Lytton, had, however, to deal with a situation of unusual difficulty. Two successive years of drought produced, in 1877-78, the worst famine India had known. The most strenuous exertions were made to mitigate its effects, and eight crores of rupees were spent in importing grain; but the loss of life was estimated at 5¼ millions. At this time also Afghan affairs once more became prominent.

Second Afghan War.

The Amir, Sher Ali, was found to be intriguing with Russia and that fact, coupled with his repulse of a British mission led to the second Afghan War. The British forces advanced by three routes—the Khyber, the Kurram, and the Bolan—and gained all the important vantage points of Eastern Afghanistan. Sher Ali fled and a treaty was made with his son Yakub Khan, which was promptly broken by the murder of Sir Louis Cavagnari, who had been sent as English envoy to Kabul. Further operations were thus necessary, and Sir F. (now Lord) Roberts advanced on the capital and defeated the Afghans at Charasia. A rising of the tribes followed, in spite of Sir D. Stewart's victory at Ahmed Kheyl and his advance from Kabul to Kandahar. A pretender, Sirdar Ayub Khan, from Herat prevented the establishment of peace, defeated Gen. Burrows' brigade at Maiwand, and invested Kandahar. He was routed in turn by Sir F. Roberts who made a brilliant march from Kabul to Kandahar. After the British withdrawal fighting continued between Ayub Khan and Abdur Rahman, but the latter was left undisputed Amir of Afghanistan until his death in 1901.

In the meantime Lord Lytton had resigned (1880) and Lord Ripon was appointed Viceroy by the new Liberal Government. Lord Ripon's administration is memorable for the freedom given to the Press by the repeal of the Vernacular Press Act, for his scheme of local self-government which developed municipal institutions, and for the attempt to extend the jurisdiction of the criminal courts in the Districts over European British subjects, independently of the race or nationality of the presiding judge. This attempt, which created a feeling among Europeans in India of great hostility to the Viceroy, ended in a compromise in 1884. Other reforms were the re-establishment of the Department of Revenue and Agriculture, the appointment of an Education Commission with a view to the spread of popular instruction on a broader basis, and the abolition by the Finance Minister (Sir Evelyn Baring, now Lord Cromer) of a number of customs duties. Lord Dufferin, who succeeded Lord Ripon in 1884, had to give his attention more to external than internal affairs: one of his first acts was to hold a durbar at Rawalpindi for the reception of the Amir of Afghanistan which resulted in the strengthening of British relations with that ruler. In 1885 a third Burmese war became necessary owing to the truculent attitude of King Thibaw and his intrigues with foreign Powers. The expedition, under General Prendergast, occupied Mandalay without difficulty and King Thibaw was exiled to Ratnagiri, where he died on 16th December 1916. His dominions of Upper Burma were annexed to British India on the 1st of January, 1886.

The Russian Menace.

Of greater importance at the time were the measures taken to meet a possible, and as it then appeared a probable, attack on India by Russia. These preparations, which cost over two million sterling, were hurried on because of a collision which occurred between Russian and Afghan troops at Penjdeh, during the delimitation of the Afghan frontier towards Central Asia, and which seemed likely to lead to a declaration of war by Great Britain. War was averted, but the Penjdeh incident had called attention to a menace that was to be felt for nearly a generation more; it had also served to elicit from the Princes of India an unanimous offer of troops and money in case of need. That offer bore fruit under the next Viceroy, Lord Lansdowne, when the present system of Imperial Service Troops was organised. Under Lord Lansdowne's rule also the defences of the North-Western Frontier were strengthened, on the advice of Sir Frederick (now Earl) Roberts, who was then Commander-in-Chief in India. Another form of precautionary measure against the continued aggression of Russia was taken by raising the annual subsidy paid by the Indian Government to the Amir from eight to twelve lakhs.

On the North-Eastern Frontier there occurred (1891) in the small State of Manipur a revolution against the Raja that necessitated an inquiry on the spot by Mr. Quinton, the Chief Commissioner of Assam. Mr. Quinton, the commander of his escort, and others, were treacherously murdered in a conference and the escort ignominiously retreated. This disgrace to British arms led to several attacks on frontier outposts which were brilliantly defeated. Manipur was occupied by British troops and the government of the State was reorganised under a Political Agent. Lord Lansdowne's term of office was distinguished by several other events, such as the passing of the Parliamentary Act (Lord Cross's Act, 1892), which increased the size of the Legislative Councils as well as the number of non-officials in them: legislation aimed at social and domestic reform among the Hindus: and the closing of the Indian Mints to the free coinage of silver (1893). In Burma great progress was made, under Sir Alexander Mackenzie, as Chief Commissioner: comparative order was established, and large schemes for the construction of railways, roads, and irrigation works were put in hand. (The Province was made a Lieutenant-Governorship in 1897).

Frontier Campaigns.

Lord Elgin, who succeeded Lord Lansdowne in 1894, was confronted at the outset with a deficit of Rs. 2¼ crores, due to the fall in exchange. (In 1895 the rupee fell as low as 1*s.* 1*d.*) To meet this the old five per cent. import duties were reimposed on a number of commodities, but not on cotton goods: and within the year the duty was extended to piece-goods, but not to yarn. The reorganisation of the Army, which involved the abolition of the old system of Presidency Armies, had hardly been carried out when a number of risings occurred along the North-West Frontier. In 1895 the British Agent in Chitral—which had come under British influence two years previously when Sir H. M. Durand had demarcated the southern and eastern boundaries of Afghanistan—was besieged and had to be rescued by an expeditionary force. Two years later the Wazirs, Swatis, and Mohmands attacked the British positions in Malakand, and the Afridis closed the Khyber Pass. Peace was only established after a prolonged campaign (the Tirah campaign) in which 40,000 troops were employed, and over 1,000 officers

and men had been lost. This was in itself a heavy burden on the finances of India, which was increased by the serious and widespread famine of 1896-97 and by the appearance in India of bubonic plague. The methods taken to prevent the spread of that disease led, in Bombay, to rioting, and elsewhere to the appearance in the vernacular press of seditious articles which made it necessary to make more stringent the law dealing with such writings.

Lord Curzon's Viceroyalty.

With famine and plague Lord Curzon also, who succeeded Lord Elgin in 1899, had to deal. In 1901 the cycle of bad harvests came to an end; but plague increased, and in 1904 deaths from it were returned at over one million. Of the many problems to which Lord Curzon directed his attention, only a few can be mentioned here: some indeed claim that his greatest work in India was not to be found in any one department but was in fact the general gearing up of the administration which he achieved by his unceasing energy and personal example of strenuous work. He had at once to turn his attention to the North-West Frontier. The British garrisons beyond our boundary were gradually withdrawn and replaced by tribal levies, and British forces were concentrated in British territory behind them as a support. An attempt was made to check the arms traffic and work on strategic railways was pushed forward. The fact that in seven years he only spent a quarter of a million upon repressive measures and only found it necessary to institute one blockade (against the Mahsud Waziris) is the justification of this policy of compromise between the Lawrence and Forward schools of thought. In 1901 the trans-Indus districts of the Punjab were separated from that Province, and together with the political charges of the Malakand, the Khyber, Kurram, Tochi, and Wana were formed into the new North-West Frontier Province, under a Chief Commissioner directly responsible to the Government of India. That year also witnessed the death of Abdur Rahman, the Amir of Afghanistan, and the establishment of an understanding with his successor Habibullah. In 1904 the attitude of the Dalai Lama of Tibet being pro-Russian and anti-British, it became necessary to send an expedition to Lhasa under Colonel (Sir Francis) Younghusband. The Dalai Lama abdicated and a treaty was concluded with his successor.

Lord Curzon as Viceroy.

In his first year of office Lord Curzon passed the Act which, in accordance with the recommendations of the Fowler Commission, practically fixed the value of the rupee at *1s. 4d.*, and in 1900 a Gold Reserve fund was created. The educational reforms that marked this Viceroyalty are dealt with elsewhere: chief among them was the Act of 1904 reorganising the governing bodies of Indian Universities. Under the head of agrarian reform must be mentioned the Punjab Land Alienation Act, designed to free the cultivators of the soil from the clutches of money-lenders, and the institution of Agricultural banks. The efficiency of the Army was increased (Lord Kitchener was Commander-in-Chief) by the re-armament of the Indian Army; the strengthening of the artillery; and the reorganisation of the transport service. In his relations with the Feudatory Chiefs, Lord Curzon emphasized their position as partners in administration, and he founded the Imperial Cadet Corps to give a military education to the sons of ruling and aristocratic families. In 1902 the British Government obtained from the Nizam a perpetual lease of the Assigned Districts of Berar in return for an annual payment of 25 lakhs. The accession of King Edward VII was proclaimed in a splendid Durbar on January 1; 1903. In 1904 Lord Curzon returned to England for a few months but was re-appointed to a second term of office, Lord Ampthill, Governor of Madras, having acted as Viceroy during his absence. The chief act of this second term was the partition of Bengal and the creation of a new Province of Eastern Bengal and Assam—a reform, designed to remove the systematic neglect of the trans-Gangetic areas of Bengal, which evoked bitter and prolonged criticism. In 1905 Lord Curzon resigned, being unable to accept the proposals of Lord Kitchener for the re-adjustment of relations between the Army headquarters and the Military Department of the Government, and being unable to obtain the support of the Home Government. He was succeeded by Lord Minto, the grandson of a former Governor-General. It was a stormy heritage to which Lord Minto succeeded, for the unrest which had long been noticed developed in one direction into open sedition. The occasion of the outburst in Bengal was the partition of that province. The causes of the flood of seditious writings and speeches, of the many attempts at assassination, and of the boycott of British goods are less easily definable. The mainspring of the unrest was "a deep-rooted antagonism to all the principles upon which Western society, especially in a democratic country like England, has been built up."

Political Outrages.

Outside Bengal attempts to quell the disaffection by the ordinary law were fairly successful. But scarcely any province was free from disorder of some kind and, though recourse was had to the deportation of persons without reason assigned under an Act of 1818, special Acts had to be passed to meet the situation, *viz*:—an Explosives Act, a Prevention of Seditious Meetings Act, and a Criminal Law Amendment Act which provides for a magisterial inquiry in private and a trial before three judges of the High Court without a jury. The need for this reinforcement of the law may be shown by a list of the principal political outrages in India while Lord Minto was Viceroy and subsequent to his departure:—

December, 1907.—Attempt to wreck the Lieutenant-Governor of Bengal's train at Naraingarh.

December, 1907.—Attempt on the life of Mr. B. C. Allen at Goalundo.

March, 1908.—Second attempt to wreck Sir Andrew Fraser's train at Chandernagore.

March, 1908.—Attempt to shoot Mr. Higginbotham, a missionary, at Kushtea.

April 11th, 1908.—Bomb thrown at the Mayor of Chandernagore.

April 30th, 1908.—Murder of Mrs. and Miss Kennedy at Mozafferpore.

August, 1908.—Mr. Camsie, Mill-manager, severely injured by a bomb on the E. B. S. Railway.

August, 1908.—Murder of Narendra Nath Gossain, the approver in the Alipore case, in Alipore Jail.

November 6th, 1908.—Attempt on the life of Sir Andrew Fraser at Overtoun Hall.

November 9th, 1908.—Murder of Inspector Nundo Lall Banerjee, who arrested Khudiram Bose, in Serpentine Lane, Calcutta.

November, 1908.—Sukumar, alleged informer, murdered at Dacca.

February 10th, 1908.—Murder of Babu Ashutosh Biswas in the Courtyard at Alipore.

June, 1909.—Prio Mohun Chatterji (brother of an approver) stabbed to death at Fatehjangpur.

July 1st, 1909.—Assassination of Lieutenant-Colonel Sir William Curzon Wyllie, at the Imperial Institute, London.

November 13th, 1909.—Bomb explosion near H. E. Lord Minto's carriage at Ahmedabad.

December 21st, 1909.—Assassination of Mr. A. M. T. Jackson, I.C.S., Collector of Nasik.

January 24th, 1910.—Murder of Khan Bahadur Shams-ul-Alum.

February 21st, 1911.—Murder of Head Constable Srish Chakravarty.

March 2nd, 1911.—Attempt to murder Mr. Cowley, P.W.D., with a bomb in Calcutta.

April 19th, 1911.—Babu Manmohan Dey, witness in Munshiganj bomb case, shot dead at Routhbog.

June 17th, 1911.—Murder of Mr. Ashe, Collector of Tinnevelly.

June 18th, 1911.—Murder of Sub-Inspector Raj Kumar Roy at Mymensingh.

July 1911.—Sonarang case, Rashun Dewan Duffadar, Amari-Dewan, and Kati Benode Chakravarti shot at Netrapati.

September 21st, 1912.—Head Constable Radhilal Roy shot dead at Dacca.

December 13th, 1912.—Attempt to assassinate Abdul Rahaman, one of the witnesses for the police in the Midnapore conspiracy case.

December 23rd, 1912.—H. E. Lord Hardinge wounded, and one of his servants killed, by a bomb during the State entry into Delhi.

March 27th, 1913.—Attempt to murder Mr. Gordon, the sub-divisional officer, with a bomb at Molvi Bazaar, Sylhet.

May 17th, 1913.—Chaprasi in the employ of the Lahore Gymkhana Club killed by a bomb near the Lawrence Gardens, Lahore.

September 29th, 1913.—Murder of Head Constable Haripado Deb, College Square, Calcutta.

September 30th, 1913.—Bankim Chandra Chowdhury, Inspector of Police at Mymensingh, formerly of Dacca, killed by a bomb.

January 19th, 1914.—Nripendra Nath Ghose, Inspector of the Calcutta C.I.D., shot dead on the Chitpur Road, Calcutta. A Teli boy, named Ananda, was also shot dead.

November 27th, 1914.—Seven persons committed to Ferozpore Sessions for shooting dead Sub-Inspector Bishrat Ali and Zemindar Jowala Singh.

February 28th, 1915.—Police Inspector Suresh Chandra Mukerji, who had been engaged in connexion with taxi-cab dacoities in Calcutta, shot dead while on duty by four men with revolvers. His orderly was wounded. The assassins escaped.

March 9th, 1915.—Mussalmanpura Bomb Case. Two bombs were thrown at the house occupied by Mr. Basant Kumar Chatterji, Deputy Superintendent of Police.

April 30th, 1915.—Lahore Sedition trial. Three bombs, one revolver, one dagger and materials for bombs were found. The conspirators attempted to loot the Government treasury at Moga. They were met by Bishrat Alli, Sub-Inspector of Police. A scuffle ensued which culminated in the death of the Sub-Inspector as well as of Jowala Singh Ziladar.

August 25th, 1915.—Commissioner of Danihatti shot dead. A police constable seriously injured by several revolver shots fired from a Motor Car in an outrage near Calcutta.

October 9th, 1915.—Jatindra Mohun Ghose, Deputy Superintendent of Police and his son shot dead at Mymensingh.

October 22nd, 1915.—Sub-Inspector Girindra Nath Banerjee killed and another officer wounded in an attempt on the lives of four C. I. D. officers in Calcutta.

June 23rd, 1916.—Two police Officers named Surendra Bhushan Mukerji and Rohini Mukerji, of the Dacca Intelligence Branch, were shot dead.

The list, it will be seen, includes two attempts on the life of the Viceroy himself. It does not include a number of equally significant disturbances, such as the riots in Bombay (June 1908), during the trial of Tilak, which led to considerable loss of life. Concurrently with these repressive measures steps were taken to extend representative institutions. In 1907 a Hindu and a Mahomedan were appointed to the Secretary of State's Council, and in 1909 a Hindu was appointed for the first time to the Viceroy's Council. The Indian Councils Act of 1909 carried this policy farther by reconstituting the legislative councils and conferring upon them wider powers of discussion. The executive councils of Madras and Bombay were enlarged by the addition of an Indian member.

Lord Minto.

As regards foreign policy, Lord Minto's Viceroyalty was distinguished by the conclusion (1907) between Great Britain and Russia of an agreement on questions likely to disturb the friendly relations of the two countries in

Asia generally, and in Persia; Afghanistan and Tibet in particular. Two expeditions had to be undertaken on the North-West frontier, against the Zakka Khels and the Mohmands; and ships of the East Indies Squadron were frequently engaged off Maskat and in the Persian Gulf in operations designed to check the traffic in arms through Persia and Mekran to the frontier of India. Towards Native States Lord Minto adopted a policy of less interference than that followed by his predecessor. He invited their views on sedition, and, in a speech at Udaipur, disclaimed any desire to force a uniform system of administration in Native States, and said he preferred their development with due regard to treaties and local conditions. Lord Minto left India in November, 1910, a few weeks after Lord Morley had resigned the Secretaryship of State, the tenure of their respective posts having been practically identical in point of time. The position of the Viceroy had in those years materially changed. Lord Minto had a weak Council, and this weakness was reflected in the government of Bengal and Madras; but it is more important to note that Lord Morley had extended the policy of transferring the actual government of India from India to London, to such an extent that the Under-Secretary for India was able to describe the Viceroy as merely the agent of the Secretary of State.

Visit of the King and Queen.

Sir Charles (Lord) Hardinge was appointed to succeed Lord Minto. His first year in India was marked by a weak monsoon and famine in parts of Western India, still more by the visit to India of the King Emperor and the Queen, who arrived at Bombay on December 2, 1911. From there they proceeded to Delhi where, in the most magnificent durbar ever held in India, the coronation was proclaimed and various boons, including an annual grant of 50 lakhs for popular education, were announced. At the same ceremony His Majesty announced the transfer of the capital of India from Calcutta to Delhi; the reunion of the two Bengals under a Governor-in-Council; the formation of a new Lieutenant-Governorship for Behar, Chota Nagpur, and Orissa, and the restoration of Assam to the charge of a Chief Commissioner. On December 14, a review of 60,000 British and Indian troops was held, and on the 15th Their Majesties each laid a foundation stone of the new capital. From Delhi the King went to Nepal, and the Queen to Agra and Rajputana, afterwards meeting at Bankipur and going to Calcutta. Thence they returned to Bombay and sailed for England on January 10. "From all sources, public and private," wrote His Majesty to the Premier, "I gather that my highest hopes have been realised.....Our satisfaction will be still greater if time proves that our visit has conduced to the lasting good of India and of the Empire at large."

In March, 1912, a committee of experts was appointed to advise the Government of India as to the site of the new capital. Temporary buildings were erected to accommodate the Government, and on December 23 the State entry into Delhi was made by the Viceroy. This ceremony was marred by an attempt on His Excellency's life as he passed down the Chandni Chauk. The bomb thrown from a house killed an attendant behind the Howdah in which the Viceroy was sitting, seriously wounded Lord Hardinge, but left Lady Hardinge unscathed. The courage displayed by Their Excellencies was unsurpassed and elicited the admiration of all; but, in spite of the offer of large rewards, the assassin was not caught.

In August, 1913, the demolition of a lavatory attached to a mosque in Cawnpore was made the occasion of an agitation among Indian Mahomedans and a riot in Cawnpore led to heavy loss of life. Of those present at the riot, 106 were put on trial but subsequently released by the Viceroy before the case reached the Sessions, and His Excellency was able to settle the mosque difficulty by a compromise that was acceptable to the local and other Mahomedans.

In the latter part of 1913 considerable feeling was aroused in India by the circulation of stories—many of them shown to be unfounded—about the ill-treatment of Indians in South Africa. Rioting by Indians in Natal was followed by the appointment by the Union Government of a Committee of Inquiry at which the Government of India was represented by Sir Benjamin Robertson. The Commission's report afforded the basis of a settlement commonly regarded as equitable. In the autumn of 1914 the Viceroy, at a Council meeting, outlined a reciprocal scheme for controlling emigration in India and in the Colonies, as an alternative to the principle of free migration between all parts of the Empire, for which the Government of India had long contended.

Effects of the War.

The various effects of the European war upon India are fully discussed elsewhere. But it must here be set on record that the declaration of war was followed in India by an unprecedented declaration of loyalty on all sides, and the numerous offers of help or personal service made by the Chiefs and peoples aroused in England a feeling of intense gratitude. A military force numbering some 200,000 was sent from India to Europe and East Africa, within a short time of the outbreak of hostilities. The announcement of that fact was made on the same day that a message from the King-Emperor was published. In it His Imperial Majesty said:—"Amongst the many incidents that have marked the unanimous uprising of the populations of my Empire in defence of its unity and integrity, nothing has moved me more than the passionate devotion to my Throne expressed both by my Indian and English subjects and by the Feudatory Princes and Ruling Chiefs of India and their prodigious offers of their lives and their resources in the cause of the realm. Their one-voiced demand to be foremost in the conflict has touched my heart and has inspired to the highest issues the love and devotion which, as I well know, have ever linked my Indian subjects and myself." India was not included in the actual theatre of hostilities, except when Madras was subjected to a slight bombardment by the German cruiser "Emden;" but shipping in the Bay of Bengal and in the Arabian Sea was on several occasions interfered with, and several vessels were sunk by enemy ships.

There were several fights on the North-West frontier during 1914 and 1915, but the tribesmen never succeeded in penetrating far into British territory. In Bengal, as will be seen from the list of anarchical crimes quoted above, there were a number of signs that the spirit of lawlessness had by no means been stamped out. More serious, however, to the welfare of the country as a whole was the return in September, 1914 (see Indian Year Book, 1914) of a number of Sikh emigrants from British Columbia. The riot at Budge-Budge on that occasion gave a foretaste of the revolutionary plans entertained by many of these men. The sequel was seen in the Lahore Conspiracy case in which a Special Commission sentenced 24 persons to death, 27 to transportation for life, and six to terms of imprisonment. The judgment showed that a plot had been prepared with the object of overthrowing the Government, and the evidence in the case supported the idea that Germans had aided the conspirators and that at least after the war broke out the conspirators regarded themselves as leagued with the enemies of Great Britain. Of the death sentences 16 were subsequently commuted to transportation for life. The appeals in the Delhi Conspiracy case (See Indian Year Book, 1914, p. 650) were heard in the early part of the year—four by the Privy Council—and the sentences confirmed.

In the spring of 1916 Lord Hardinge, whose great services had just been rewarded with the Knighthood of the Garter, left India after receiving from all parts of the country proofs of the very high esteem in which he was held. His successor Lord Chelmsford had previous to his appointment served in India as an officer of a Territorial regiment.

Developments in 1917-1918.

The year 1917 was in many ways particularly eventful in India. In addition to continuing its former services in connexion with the war, the country assisted by assuming responsibility for 100 millions of the war debt and raising 40 crores by a War Loan, and by developing its resources with the help of a Munitions Board. But the part played by India in the war was more directly emphasised by her representation by H. H. the Maharaja of Bikanir and Sir S. P. Sinha at the meeting of the Imperial War Cabinet in London. Not for the first time was the war brought literally to the gates of India—by the laying of enemy mines off Bombay which led to the loss of the P.& O. S.S. Mongolia and other ships, while other India-bound vessels were lost off Cape Town and by submarine action in the Mediterranean and the Channel. The result of these attacks on shipping was the prohibition on women travelling to or from India through any war zone. The creation of the Indian Defence Force in place of the Volunteer Force, which came to an end on March 31, was an experiment which attracted the widest attention throughout the country and of which a detailed account is given elsewhere in this volume.

On the frontier it was necessary to undertake punitive measures against the Mahsuds, whose depredations for the past two years in Dera Ismail Khan and Bannu were followed by outrages on the Derajat border which could not be ignored. After a brief campaign the tribesmen were brought to a settlement, and in August the Waziristan Field Forces dispersed. A special Order of the Day issued by the Commander-in-Chief noted that for the first time the tribesmen on this part of the frontier had felt the power of the Royal Flying Corps, which carried out its duties with the dash and daring to which the Army has become accustomed." In the early part of the year judgment was delivered in the second supplementary Lahore conspiracy case (see above). It showed the wide-spread nature of the Ghadr conspiracy and established beyond question that after the outbreak of war Germany consistently encouraged it and that the revolutionists eagerly associated themselves with Germany.

To the conclusions of the Public Services Commission and of the Mesopotamia Commission reference is made elsewhere in this book. The publication of the latter Commission's report led to the resignation of the Secretary of State, Mr. Chamberlain, who had proposed to visit India during the year, thus establishing a new precedent which was adopted by his successor, Mr. Montagu. The visit took place at a time when the movement in favour of Home Rule for India had attained to the highest pitch yet witnessed and at a time when, as was shown by the increase of Indian representation on the Council of India and by the grant of commissions in the Army to Indians, the Government was anxious to meet the wishes of the people so far as it could without departing from its policy of avoiding controversial political issues during the war.

The effect of the Secretary of State's visit was shown in 1918 when there was published the report, summarised elsewhere in this volume, on constitutional reforms. Shortly after it there was published also a report by a special committee of inquiry, over which Mr. Justice Rowlatt presided into seditious crimes in India. These two reports largely monopolised public attention during the latter part of the year. Before their appearance, however, political controversy, which was in abeyance in the early years of the war, had revived and it had become apparent that party divisions were greatly widening.

The partial failure of the rains increased the difficulties of food supply which had already been created by the war and by the maintenance of high prices. There was none the less throughout the whole country a marked increase in the effort to make India's share in the war commensurate with her greatness. Appreciation of the German menace to India through Persia and Central Asia, consequent on the collapse of Russia and the German treaties forced on Russia and Rumania, led to attempts, which were in great measure successful, materially to increase the number of recruits for combatant and non-combatant services and to the resolution in the Imperial Council that a further financial contribution should be made. Particular attention was also devoted during the year to the better organization and development for war purposes of the country's economic resources

The Government of India.

The impulse which drove the British to India was not conquest but trade. The Government of India represents the slow evolution from conditions established to meet trading requirements. On September 24, 1599, a few years before the deaths of Queen Elizabeth and Akbar, the merchants of London formed an association for the purpose of establishing direct trade with the East and were granted a charter of incorporation. The Government of this Company in England was vested in a Governor with a General Court of Proprietors and a Court of Directors. The factories and affairs of the Company on the East and West Coast of India, and in Bengal, were administered at each of the principal settlements of Madras (Fort St. George), Bombay and Calcutta (Fort William), by a President or Governor and a Council consisting of the senior servants of the Company. The three "Presidencies" were independent of each other and subordinate only to the Directors in England.

Territorial Responsibility Assumed.

The collapse of Government in India consequent on the decay of Moghul power and the intrigues of the French on the East Coast forced the officers of the Company to assume territorial responsibility in spite of their own desires and the insistent orders of the Directors. Step by step the Company became first the dominant, then the paramount power in India. In these changed circumstances the system of government by mutually independent and unwieldy councils of the merchants at the Presidency towns gave rise to grave abuses. Parliament intervened, and under the Regulating Act of 1773, a Governor-General and four councillors were appointed to administer the Presidency of Fort William (Bengal), and the supremacy of that Presidency over Madras and Bombay was for the first time established. The subordinate Presidencies were forbidden to wage war or make treaties without the previous consent of the Governor-General of Bengal in Council, except in cases of imminent necessity. Pitt's Act of 1784, which established the Board of Control in England, vested the administration of each of the three Presidencies in a Governor and three councillors, including the Commander-in-Chief of the Presidency Army. The control of the Governor-General-in-Council was somewhat extended, as it was again by the Charter Act of 1793. Under the Charter Act of 1833 the Company was compelled to close its commercial business, and it became a political and administrative body holding its territories in trust for the Crown. The same Act vested the direction of the entire civil and military administration and sole power of legislation in the Governor-General-in-Council, and defined more clearly the nature and extent of the control to be extended over the subordinate governments. After the Mutiny, there was passed, in 1858, an Act transferring the Government of India from the Company to the Crown. This Act made no important change in the administration in India, but the Governor-General, as representing the Crown, became known as the Viceroy. The Governor-General is the sole representative of the Crown in India; he is assisted by a Council, composed of high officials, each of whom is responsible for a special department of the administration.

Functions of Government.

The functions of the Government of India are perhaps the most extensive of any great administration in the world. It claims a share in the produce of the land and in the Punjab and Bombay it has restricted the alienation of land from agriculturists to non-agriculturists. It undertakes the management of landed estates where the proprietor is disqualified. In times of famine it undertakes relief work and other remedial measures on a great scale. It manages a vast forest property and is the principal manufacturer of salt and opium. It owns the bulk of the railways of the country, and directly manages a considerable portion of them; it has constructed and maintains most of the important irrigation works; it owns and manages the post and telegraph systems; it has the monopoly of the Note issue, and it alone can set the mints in motion. It lends money to municipalities, rural boards, and agriculturists and occasionally to owners of historic estates. It controls the sale of liquor and intoxicating drugs and has direct responsibilities in respect to police, education; medical and sanitary operations and ordinary public works of the most intimate character. The Government has also close relations with the Native States which collectively cover more than one-third of the whole area of India and comprise more than one-fifth of its population. The distribution of these great functions between the Government of India and the provincial administrations fluctuates; broadly speaking it may be said that the tendency of the day is to confine the Government of India to control and the Local Governments to administration.

Division of Responsibility.

The Government of India retains in its own hands all matters relating to foreign relations defence, general taxation, currency, debt, tariffs, posts, telegraphs and railways. The ordinary internal administration—the assessment and collection of revenue, education, medical and sanitary arrangements, and irrigation, buildings and roads, fall within the purview of the Local Governments. In all these matters the Government of India exercises a general and constant control. It prescribes lines of general policy, and tests their application from the annual administration reports of the Local Authorities. It directly administers certain Imperial departments, such as Railways, Post Office, Telegraphs, the Survey of India and Geology; it employs a number of inspecting officers for those departments primarily left to Local Governments; including Agriculture, Irrigation; Forests; Medical and Archæology. It receives, and when necessary modifies, the annual budgets

of Local Governments; and every new appointment of importance, and every large addition even to minor establishments has to receive its specific sanction. There also exists a wide field of appeal to the Government of India from officials or private individuals who may feel themselves aggrieved by the action of Local Governments; and outside the Presidencies of Madras, Bombay and Bengal, the approval of the Governor-General is necessary to the appointment of some of the most important officers of the provincial administration. The supervision of the principal Native States rests directly with the Governor-General in-Council, but Local Governments have also responsibilities in this direction, where important States have historical association with them, and in the case of minor States.

Personnel of the Government.

The Governor-General and the "ordinary" members of his Council are appointed by the Crown. No limit of time is specified for their tenure of office, but custom has fixed it at five years. There are six "ordinary" members of Council, three of whom must, at the time of their appointment, have been at least ten years in the service of the Crown in India, one of the three remaining members must be a Barrister, the qualifications of the fifth and sixth are not prescribed by statute. The Indian civilians hold respectively the portfolios of Land Revenue and Agriculture, the Home, the Finance and the Education Departments. The Law Member has charge of the Legislative Department, and a member with English official experience has charge of the Commerce and Industry Department. The Viceroy acts as his own member in charge of Foreign affairs. Railways are administered by a Board of three members, whose chairman has the status of a Secretary, and are under the general control of the Commerce and Industry Department. The Commander-in-Chief may also be and in practice always is, an "extraordinary" member of the Council. He holds charge of the Army Department. The Governors of Madras, Bombay and Bengal become "extraordinary" members if the Council meets within their Presidencies. The Council may assemble at any place in India which the Governor-General appoints; in practice it meets only in Delhi and Simla.

Business Procedure.

In regard to his own Department each Member of Council is largely in the position o a Minister of State, and has the fina voice in ordinary departmental matters. But any question of special importance; and any matter in which it is proposed to over-rule the views of a Local Government, must ordinarily be referred to the Viceroy. Any matter originating in one department which also affects another must be referred to the latter, and in the event of the Departments not being able to agree, the case is referred to the Viceroy. The Members of Council meet periodically as a Cabinet—ordinarily once a week—to discuss questions which the Viceroy desires to put before them, or which a member who has been over-ruled by the Viceroy has asked to be referred to Council. If there is a difference of opinion in the Council the decision of the majority ordinarily prevails; but the Viceroy can over-rule a majority if he considers that the matter is of such grave importance as to justify such a step. Each departmental office is in the subordinate charge of a Secretary, whose position corresponds very much to that of a permanent Under-Secretary of State in the United Kingdom, but with these differences—that the Secretary is present at Council meetings; that he attends on the Viceroy, usually once a week, and discusses with him all matters of importance arising in his Department; that he has the right of bringing to the Viceroy's special notice any case in which he considers that the Viceroy's concurrence should be obtained to action proposed by the Departmental Member of Council; and that his tenure of office is usually limited to three years. The Secretaries have under them Deputy, Under and Assistant Secretaries, together with the ordinary clerical establishments. The Secretaries and Under-Secretaries are usually members of the Indian Civil Service. The Government of India has no Civil Service of its own as distinct from that of the Provincial Governments, and officers serving under the Government of India are borrowed from the Provinces.

The proposals of the Viceroy, Lord Chelmsford, and the Secretary of State for India, Mr. Montagu, for the constitutional development of India in the direction of responsible government are embodied in a separate section q. v.

Government of India.

VICEROY AND GOVERNOR-GENERAL OF INDIA.

His Excellency the Right Hon. BARON CHELMSFORD, P.C., G.M.S.I., G.C.M.G., G.M.I.E., G.C.B.E.;

assumed charge of office, 5th April, 1916.

PERSONAL STAFF OF THE GOVERNOR-GENERAL.

Private Secretary, J. L. Maffey, C.I.E., I.C.S.

Military Secretary, Lieut.-Col. R. Verney, The Rifle Brigade.

Comptroller of the Household, Major J. Mackenzie, C.I.E., 35th Sikhs.

Asst. Private Secretary, Captain W. Buchanan-Riddell.

Aides-de-Camp, Captain J. A. Denny Grenadier Guards; Captain C. A. Lord Carnegie, Scots-Guards; Major E. H. Arkwright, R.A.; Major R. D. Alexander, 3rd Gurkha Rifles; Muhi-ud-din Khan, Risaldar-Major Sardar Bahadur, 31st Lancers; Mohamad Akbar Ali Khan, Risaldar-Major Sardar Bahadur, 7th Hariana Lancers.

Honorary Aides-de-Camp, Lumsden, R. Admlr.W., R. N C.V.O.; Stanyon, Hony. Col. H. J., C.I.E., V.D., Nagpur Volunteer Rifles; Cuffe, Hony. Lt.-Col. O. F. L. W., V.D., Upper Burma Vol. Rifles; Agabeg, Hony. Col. F. J., Chota Nagpur Light Horse; Grice, Hony. Col. W. T., V.D., 1st Battalion, Calcutta Vol. Rifles; Knowles, Hony. Col. J. G., C.I.E., V.D., Surma V.L. Horse; Warburton, Hony. Col. H. G., Luck. V. Rifles; Pugh, Hony. Col. A. J., V.D., Calcutta Light Horse; Reed, Hony. Lt.-Col. Sir Stanley, Bombay Light Horse; Henry, Hony. Col. W. D., C.I.E., Simla Vol. Rifles; Muhammad Ali Beg, Hony. Lt.-Col. Sir Nawab Bahadur, K.C.I.E., M.V.O., Commanding H. H. the Nizam's Forces; Zorawar Singh, Capt. Commandant, Bhawanagar Imperial Service Lancers; Maharaj Sher Singh, Commandant, 2nd Sardar Risala, Jodhpur Imperial Service Troops.

Wali Muhamad, Risaldar-Major (Hony. Capt.) Sardar Bahadur, late Governor-General's Body Guard; Abdul Azizh Risaldar-Maj. (Hony. Capt.) Sardar Bahadur, late 5th Cav.; Madho Singh Rana, Subadar-Major (Hony. Capt.) Sardar Bahadur, late 4th G. R.; Abdul Karim Khan, Risaldar-Major (Hony. Capt.) Sardar Bahadur, late Governor-General's Body-Guard; Mit Singh, Subadar-Major Sardar Bahadur, late 53rd Sikhs.

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Surgeon, Lieut.-Col. H. Austen-Smith, M. B., I. M. S.

Commandant of Body Guard, Capt. A. Brooke, 18th Lancers.

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Sir G. S. Barnes, K.C.B. Took his seat, 6th April, 1916.

Sir William Henry Hoare Vincent. Took his seat, 21st April, 1917.

Sir James Scorgie Meston, K.C.S.I., Finance.

Sir C. H. A. Hill, K.C.S.I., C.I.E. Took his seat, 5th July, 1915.

Sir C. Sankaran Nair. Took his seat, 2nd November, 1915.

Sir G. R. Lowndes, K.C.S.I. Took his seat, 20th December, 1915. (*Law*).

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H. E. Gen. Sir Charles Carmichael Monro, G.C.M.G., K.C.B., Commander-in-Chief in India.

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Consg. Acht., J. Begg, F.R.I.B.A.

Elecl. Adviser, J. W. Meares, F.R.A.S., M.I.C.E., M.I.E.E.

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Actuary, H. G. W. Meikle.

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INDO-EUROPEAN TELEGRAPH DEPARTMENT.
Persian Gulf and Persian Sections.

Directors, E. E. Gunter; H. W. Smith, C.I.E.; W. King-Wood, C.I.E. (*offg.*), Commander of Cable Steamer "Patrick Stewart," F. W. Townsend.

SURVEY DEPARTMENT.

Surveyor-General of India, Col. Sir S. G. Burrard, K.C.S.I., R.E.

GEOLOGICAL SURVEY.

Director, H. H. Hayden, C.I.E., B.A., F.G.S.

Superintendents, E. Vredenburg, B.Sc., F.G.S.; L. L Fermor, D.Sc., F.G.S.; E. H. Pascoe, M.A., D.Sc., F.G.S.

Chemist, W. A. K. Christie, B.Sc., Ph.D.

BOTANICAL SURVEY.

Director, Lt.-Col. A. T. Gage, M.B.; I.M.S.; *Economic Botanist*, H. G. Carter, M.B.A.B.; *Economic Botanist, Madras*, F. R. Parnell; *Economic Botanist, Bombay*, W. Burns, B.Sc.; *Economic Botanist, United Provinces*, H. M. Leake, M.A., F.L.S.

ARCHÆOLOGICAL SURVEY.

Director-General of Archæology, Sir J. H. Marshall, M.A., C.I.E.; *Superintendent, Western Circle*, D. R. Bhandarkar, M.A.; *Superintendent, Southern Circle*, A. H. Longhurst; *Superintendent, Eastern Circle*, D. B. Spooner; *Superintendents, Northern Circle*, J. F. Blakiston; J. A. Page (*sub-protem*); *Superintendent, Burma*, Taw Sein Ko, C.I.E., I.S.O., *Superintendent, Frontier Circle*, Sir M. A. Stein, K.C.I.E., Ph.D., D.Litt., D.Sc.

MISCELLANEOUS APPOINTMENTS.

Director-General, Indian Medical Service, Col. Edwards, I.M.S.

Sanitary Commissioner with the Government of India, Major F. Norman White.

Deputy Director-General, Indian Medical Service, Lt.-Col. H. F. Cleveland, V.H.S., I.M.S.

Asstt. D. G. I.M.S., Major R. A. Needham.

Asstt. Director-General, Indian Medical Service (*Sany.*), Major H. Ross.

Director, Central Research Institute, Kasauli, Major W. F. Harvey, M.A., M.B., D.P.H., I.M.S.

Assistants to Director, Central Research Institute, Kasauli, Major E. D. W. Greig, Major E. C. Hodgson, Major S. R. Christophers. *Sub. pro tem.* Major J. Cunningham.

Director, Pasteur Institute of India, Kasauli, Major W. F. Harvey.

Asst. Director, Pasteur Institute of India, Kasauli, Major S. R. Christophers.

Superintendent, X-ray Institute, Dehra Dun, Major A. E. Walter, I.M.S.

Director, King Institute of Preventive Medicine, F. M. Gibson, M.B., B.Sc.

Asst. Director, King Institute of Preventive Medicine, Major W. S. Patton, M.B., I.M.S.

Director-General of Indian Observatories, G. T. Walker, C.S.I., M.A., D.Sc., F.R.S.

Imperial Meteorologists, G. C. Simpson, D.Sc.; C. W. B. Normand; Hemraj, Rai Bahadur.

Director, Kodaikanal and Madras Observatories, J. Evershed.

Director, Bombay and Alibagh Observatories, Bombay, N. A. F. Moos.

Director, Aerological Observatory, Agra, J. H. Field, M.A.

Secretary, Board of Examiners, Major C. L. Peart, I.A.

Officer in Charge of the Records of the Government of India, A. F. Scholfield, M.A., (*offg.*)

Librarian, Imperial Library, Calcutta, J. A. Chapman.

Agricultural Adviser and Director of the Agricultural Research Institute, Pusa, J. Mc. Kenna.

Director, Zoological Survey of India, Indian Museum, N. Annandale, B.A., D.Sc.

Curator, Industrial Section of Indian Museum, D. Hooper, F.C.S., F.L.S.

Chief Inspector of Mines, G. F. Adams.

Controller of Printing, Stationery and Stamps; M. J. Cogswell.

Superintendent of Government Printing, J. J. Meikle.

Chief Inspector of Explosives, Lieut.-Col. C. A. Muspratt-Williams, R.A.

Administrator-General of Bengal, H. T. Hyde.

Director, Criminal Intelligence, Sir C. R. Cleveland, K.C.I.E.

Director-General of Commercial Intelligence, H. A. F. Lindsay, I.C.S.

Director of Statistics, G. F. Shirras.

Customs and Excise Chemist, R. L. Jenks.

Controller of Patents and Designs, H. G. Graves.

GOVERNORS-GENERAL OF FORT WILLIAM IN BENGAL.

Name.	Assumed charge of office.
Warren Hastings	20 Oct. 1774
Sir John Machpherson, Bart. ..	8 Feb. 1785
Earl Cornwallis, K.G. (*a*) ..	12 Sep. 1786
Sir John Shore, Bart. (*b*) ..	28 Oct. 1793
Lieut.-General the Hon. Sir Alured Clarke, K.C.B. (*offg.*) ..	17 March 1798
The Earl of Mornington, P.C. (*c*)	18 May 1798
The Marquis Cornwallis, K. G. (2nd time)	30 July 1805
Sir George H. Barlow, Bart. ..	10 Oct. 1805
Lord Minto, P.C. (*d*)	31 July 1807
The Earl of Moira, K.G., P.C. (*e*) ..	4 Oct. 1813
John Adam (*offg.*)	13 Jan. 1823
Lord Amherst, P.C. (*f*)	1 Aug. 1823
William Butterworth Bayley (*offg.*)	13 Mar. 1828
Lord William Cavendish Bentinck, G.C.B., G.C.H., P.C.	4 July 1828

(*a*) Created Marquess Cornwallis, 15 Aug. 1792

(*b*) Afterwards (by creation) Baron Teignmouth.

(*c*) Created Marquess Wellesley, 2 Dec., 1799.

(*d*) Created Earl of Minto, 24 Feb.; 1813.

(*e*) Created Marquess of Hastings, 2 Dec., 1816

(*f*) Created Earl Amherst, 2 Dec., 1826.

GOVERNORS-GENERAL OF INDIA.

Name.	Assumed charge of office.
Lord William Cavendish Bentinck, G.C.B., G.C.H., P.C. ..	.. 14 Nov. 1834
Sir Charles Metcalfe, Bart. (*a*) (*offg*).	20 March 1835
Lord Auckland, G.C.B., P.C. (*b*)	4 March 1836
Lord Ellenborough, P.C. (*c*)	.. 28 Feb. 1842
William Wilberforce Bird (*offg.*)	15 June 1844
The Right Hon. Sir Henry Hardinge, G.C.B. (*d*)	..23 July 1844
The Earl of Dalhousie, P.C. (*e*)	..12 Jan. 1848
Viscount Canning, P.C. (*f*)	..29 Feb. 1856

(*a*) Afterwards (by creation) Baron Metcalfe.

(*b*) Created Earl of Auckland, 21 Dec., 1839.

(*c*) Afterwards (by creation) Earl of Ellenborough.

(*d*) Created Viscount Hardinge, 2 May, 1846.

(*e*) Created Marquess of Dalhousie, 25 Aug. 1849.

(*f*) Afterwards (by creation) Earl Canning.

NOTE.—The Governor-General ceased to be the direct Head of the Bengal Government from the 1st May, 1854, when the first Lieutenant-Governor assumed office. On 1st April, 1912, Bengal was placed under a separate Governor and the appointment of Lieutenant-Governor was abolished.

VICEROYS AND GOVERNORS-GENERAL OF INDIA.

Name.	Assumed charge of office.
Viscount Canning, P.C. (*a*) ..	1 Nov. 1858
The Earl of Elgin and Kincardine, K.T., G.C.B., P.C. ..	12 March 1862
Major-General Sir Robert Napier, K.C.B. (*b*) (*offg.*) ..	..21 Nov. 1863
Colonel Sir William T. Denison, K.C.B. (*offg.*)	.. 2 Dec. 1863
The Right Hon. Sir John Lawrence, Bart., G.C.B., K.C.S.I. (*c*) ..	12 Jan. 1864
The Earl of Mayo, K.P. ..	12 Jan. 1869
John Strachey (*d*) (*offg.*) ..	9 Feb. 1872
Lord Napier of Merchistoun, K. T. (*e*) (*offg.*)	..23 Feb. 1872
Lord Northbrook, P.C. (*f*) ..	3 May 1872
Lord Lytton, G.C.B. (*g*) ..	..12 Apl. 1876
The Marquess of Ripon, K.G., P.C.	8 June 1880
The Earl of Dufferin, K.P., G.C.B., G.C.M.G., P.C. (*h*) ..	..13 Dec. 1884
The Marquess of Lansdowne, G. C. M. G.	..10 Dec. 1888
The Earl of Elgin and Kincardine, P. C.	..27 Jan. 1894
Baron Curzon of Kedleston, P.C.	6 Jan. 1899
Baron Ampthill (*offg.*)	30 Apl. 1904
Baron Curzon of Kedleston, P.C. (*i*)	13 Dec. 1904
The Earl of Minto, K. G., P. C., G. C. M. G.	..18 Nov. 1905
Baron Hardinge of Penshurst, P.C., G.C.B., G.C.M.G., G.C.V.O., I.S.O (*j*)	23 Nov. 1910
Lord Chelmsford	Apl. 1916

(*a*) Created Earl Canning, 21 May 1859.

(*b*) Afterwards (by creation) Baron Napier (of Magdala).

(*c*) Afterwards (by creation) Baron Lawrence.

(*d*) Afterwards Sir John Strachey, G.C.S.I., C.I.E.

(*e*) Afterwards (by creation) Baron Napier of Ettrick.

(*f*) Afterwards (by creation) Earl of Northbrook.

(*g*) Created Earl of Lytton; 28 April, 1880.

(*h*) Created Marquis of Dufferin and Ava; 12 Nov. 1888.

(*i*) Created an Earl .. .. June 1911

(*j*) During tenure of office, the Viceroy is Grand Master and First and Principal Knight of the two Indian Orders (G.M.S.I., and G.M.I.E.). On quitting office, he becomes G.C.S.I. and G.C.I.E., with the date of his assumption of the Viceroyalty.

The Imperial Legislative Council.

The constitution of the Executive Council of the Government of India has been sketched; for the purposes of legislation, and to bring the administration into close touch with public opinion, the Executive Council is expanded by additional members into a great legislative assembly. The first step was taken in 1861, when the Indian Councils Act provided that, for the better exercise of the power of making laws and regulations vested in the Governor-General-in-Council, he should nominate "Additional" members for the purposes of legislation only. The additional members were appointed for two years and joined the Council when it met for legislative purposes. The maximum number of members fixed by the Act was twelve, of whom not less than one half were to be non-officials (holding no office under the Government) and in practice most of the non-officials were natives of India. Similar legislative councils were constituted in some of the provinces, but the growth of these bodies will be considered when we come to deal with the provincial administrations.

The Act of 1892.

In 1892 important additions were made both to the constitution and the powers of the Legislative Council. The number of Additional members was raised to sixteen, and the representative principle was introduced. Whilst the method of appointment was, as before, nomination by the Governor-General, a certain number of nominations were made on the recommendation of specified persons, bodies and associations and in practice these recommendations were never refused. Of the sixteen Additional members, six were usually officials and ten non-officials. Four of the non-officials were nominated on the recommendation of the non-official members of the provincial Legislative Councils, the fifth was recommended by the Calcutta Chamber of Commerce, and the remaining five were chosen by the Governor-General, either with a special view to the legislative business to be transacted, or to secure the due representation of all classes. The Council was also empowered to discuss the budget and to ask questions on matters of public interest.

Morley-Minto Reforms.

The Imperial Legislative Council took its present shape under what is commonly called the Morley-Minto reform scheme of 1909, and was embodied in the Indian Councils Act of that year. Two principles run through this scheme (1) to secure the fair representation of all the varied interests in the country and (2) to give the Council a real influence in determining the character of the administration. The Imperial Legislative Council now consists of sixty Additional members, of whom thirty-five are nominated by the Governor-General and twenty-five are elected by specified electorates. Of the nominated members not more than twenty-eight may be officials, and three others who must not be officials must be nominated by the Muhamedans of the Punjab, the landholders of the Punjab, and the Indian commercial community respectively. The remaining four seats are at the Governor-General's disposal to secure experts on special subjects or representatives of minor interests. Of the twenty-five elected members, eleven are selected by the non-official members of the provincial Legislative Councils, two by each of the four largest provinces and one by each of the three other provinces. A twelfth is elected by the District and Local Boards of the Central Provinces, as that administration has no legislative council. Six members are elected by electorates of landowners in six provinces, five by the Muhamedan community in each of the five provinces, and two by the Chambers of Commerce in Calcutta and Bombay. The Governor-General-in-Council has the exceptional power of excluding a candidate whose reputation and antecedents are such that his election would be contrary to the public interest. An oath, or affirmation of loyalty to the Crown is required of every member before he takes his seat. Members hold office for three years, and each triennium there is a general election for the Council.

Powers of the Council.

The additions to the non-legislative powers of the Council by the Act of 1909 were also substantial. The Council can exercise a material influence on the Budget. The Finance Member first presents the preliminary estimates with an explanatory memorandum. On a subsequent day he makes such further explanations as he thinks necessary. Members can thereupon move resolutions regarding any proposed alteration in taxation, any proposed loan, or any additional grant to Local Governments. When these resolutions are voted upon, the estimates are taken by groups, and resolutions may be moved on any heads of revenue or expenditure. Certain heads, as for instance, Customs and the Army, are excluded from discussion. The Finance Member takes these discussions into consideration, and then presents his final budget. He describes the changes made, and why any resolutions that have been passed have not been accepted. A general discussion of the budget then takes place, but no resolution may be moved, or vote taken. Government is not bound to act upon the resolution of the Council. This power is never likely to be used, because the Government has an official majority on that body. This official majority was specially prescribed by the Secretary of State, because as Parliament is, in the last resort, responsible for the good government of India, the British Government, through its mouthpiece, the Secretary of State, must have the means of imposing its will on the Government of India.

Apart from the Budget debates, members of Council now have the right to initiate the discussion of any question of public interest at any sitting of the Council by moving a resolution. The right of interpellation has also been expanded by the power of asking supplementary questions in order to elucidate a reply given to an original question. The President of the Council may disallow any question which, in his view, cannot be answered consistently with the public interests.

Control over Legislation.

The legislative powers of the Imperial Legislative Council are still regulated by the Act of 1861. Certain Acts of Parliament under which the Government of India is constituted cannot be touched and no law can be made affecting the authority of Parliament or allegiance to the Crown. With these exceptions the legislative powers of the Governor-General-in-Council over the whole of the British India are unrestricted. Measures affecting the public debt, or the revenues of India, the religion of any of His Majesty's subjects, the discipline or maintenance of the military or naval forces, and the relations of the Government with foreign states cannot be introduced by any member without the previous sanction of the Governor-General. Every Act requires the Governor-General's assent. The assent of the Crown is not necessary to the validity of an Act, but the Crown can disallow any Act that has been passed.

Apart from these legislative powers the Governor-General-in-Council is authorised to make, without calling in the Additional Members, regulations having the force of law for the less advanced parts of the country, where a system of administration simpler than that in force elsewhere is desirable. In cases of emergency the Governor-General can, on his own authority and without reference to his Council, make Ordinances which have the force of law for six months.

All Members of the Imperial and Provincial Legislative Councils are entitled to the prefix "Hon'ble Mr." during their term of office.

A.—Elected Members.

(*Not to be less than* 27.)

Serial No.	Name.	Electorate.
1	Rao Bahadur Narasimha-wara Sarma Garu ..	Non-official Member, Madras.
2	Mr. Srinivasa Sastri	Do. do.
3	Mr. V. J. Patel	Do. Bombay.
4	Sir Dinsha Eduljee Wacha	Do. do.
5	Mr. Surendra Nath Banerjea	Do. Bengal.
6	Raj Sita Nath Ray Bahadur	Do. do.
7	Dr. Tej Bahadur Sapru	Do. United Provinces.
8	Pandit Madan Mohan Malaviya	Do. do.
9	Sardar Bahadur Sardar Sundar Singh Majithia.	Do. Punjab.
10	Maung Bah Too, C.I.E.	Do. Burma.
11	Rai Bahadur Krishna Sahay	Do. Bihar and Orissa.
12	Mr. Kamini Kumar Chanda	Do. Assam.
13	Ganesh Shri Krishna Khaparde	District Councils and Municipal Committees, Central Provinces.
14	Mr. K. V. Rangaswami Ayyangar	Landholders, Madras.
15	Khan Bahadur Sayad Allahando Shah ..	Do. Bombay. (Sardars of Gujarat.)
16	Maharaja Sir Manindra Chandra Nandi of Kasimbazar.	Landholders, Bengal.
17	Raja Sir Rampal Singh, K.C.I.E.	Do. United Provinces. (Landholders of Agra.)
18	Raja Rajendra Narayan Bhanja Deo ..	Do. Bihar and Orissa.
19	Rai Bahadur Bishan Dutt Shukul	Do. Central Provinces.
20	Khan Bahadur Mir Asad Ali Khan	Muhammadan Community, Madras.
21	Mr. Mahomed Ali Jinnah	Do. Bombay.
22	Mr. Abdur Rahim	Do. Bengal.
23	Khan Bahadur Nawab Saiyid Nawab Ali Chaudhuri.	Do. do.
24	Raja Sir Muhammad Ali Muhammad Khan, K.C.I.E., Khan Bahadur, of Mahmudabad.	Do. United Provinces.
25	Mr. Mazharul Haque	Do. Bihar and Orissa.
26	W. A. Ironside	Bengal Chamber of Commerce.
27	Mr. Malcolm N. Hogg	Bombay Chamber of Commerce.

B.—Nominated Members.
(Not to exceed 33.)

Serial No.	Name.	Province or body represented.
	(*a*) OFFICIAL MEMBERS.	
	Not more than 28.	
1	Mr. A. R. Loftus-Tottenham	Madras.
2	Mr. F. J. Monahan	Bengal.
3	Mr. C. A. Kincaid, C.V.O.	Bombay.
4	Mr. E. H. C. Walsh	Bihar and Orissa.
5	Sir Verney Lovett, K.C.S.I.	The United Provinces.
6	Vacant	The Punjab.
7	Lt.-Col. S. L. Aplin, C.S.I.	Burma.
8	Mr. F. S. A. Slocock, C.I.E.	Central Provinces.
9	Mr. W. J. Reid, C.S.I.	Assam.
10	Sir J. S. Donald, K.C.I.E., C.S.I.	The N.-W. F. Province.
11	Mr. C. H. Kesteven	Government of India.
12	Mr. H. Sharp, C.I.E.	Do.
13	Mr. R. E. Holland C.I.E.	Do.
14	Mr. S. R. Hignell C.I.E.	Do.
15	Sir E. D. Maclagan, K.C.I.E., C.S.I.	Do.
16	Mr. R. A. Mant	Do.
17	Mr. F. C. Rose	Do.
18	Mr. A. P. Muddiman, C.I.E.	Do.
19	Surgeon-General W. R. Edwards	Do.
20	Mr. G. R. Clarke, O.B.E.	Do.
21	Sir R. W. Gillan, K.C.S.I.	Do.
22	Sir A. H. Grant, C.S.I., C.I.E.	Do.
23	Mr. G. B. H. Fell, C.I.E.	Do.
24	Major-General A. H. Bingley, C.B., C.I.E. ..	Do.
25	Mr. H. F. Howard, C.I.E.	Do.
	(*b*) NON-OFFICIAL MEMBERS.	
1	Sir Fazulbhoy Currimbhoy, Kt., C.I.E.	Indian Commercial Community.
2	Khan Bahadur Mian Muhammad Shafi, C.I.E.	Muhammadan Community, Punjab.
3	Khan Zulfikar Ali Khan, C.S.I.	Landholders, Punjab.
4	Sub.-Major and Hon. Capt. Ajabkhan, Sardar Bahadur, I.O.M.	.....
5	Sir G. M. Chitnavis, K.C.I.E.	.....

Present Constitution of the Council.

I.—The whole Council.

By the proviso to Regulation I for the Legislative Council of the Governor-General it is declared that it shall not be lawful for the Governor-General to nominate so many non-official persons that the majority of all the Members of the Council shall be non-officials.

Officials—

(*a*)	Members of the Executive Council	7
(*b*)	The Lieutenant-Governor or Chief Commissioner of the Province (1)	1
(*c*)	Nominated Members	27
	Total ..	35
Non-Officials (2)—		
(*a*)	Elected Members	27
(*b*)	Nominated Members	5
	Total ..	32
	Official majority, exclusive of the Governor-General	3

II.—The Additional Members.

The Indian Councils Act, 1861, section 10, provides that not less than one-half of the Additional Members (exclusive of the Lieutenant-Governor or Chief Commissioner of the Province (1) in which the Council may for the time being be assembled) shall be non-officials.

(Present number of Additional Members exclusive of the Lieutenant-Governor or Chief Commissioner (1) as aforesaid)	Officials (nominated)	26
	Non-officials (elected and nominated) ..	31
	Vacancies	3
	Total ..	60

(*For work of Imperial Legislative Council, Session* 1915-16, *q. v.*)

The Home Government.

The Home Government of India represents the gradual evolution of the governing board of the old East India Company. The affairs of the Company were originally managed by the Court of Directors and the General Court of Proprietors. In 1784 Parliament established a Board of Control, with full power and authority to control and direct all operations and concerns relating to the civil and military government, and revenues of India. By degrees the number of the Board was reduced and its powers were exercised by the President, the lineal precursor of the Secretary of State for India. With modifications this system lasted until 1858, when the Mutiny, followed by the assumption of the Government of India by the Crown, demanded a complete change. Under the Act of 1858 (now merged in the consolidating measure passed in 1915) the Secretary of State is the constitutional adviser of the Crown on all matters relating to India. He inherits generally all the powers and duties which were formerly vested either in the Board of Control, or in the Company, the Directors and the Secret Committee in respect of the Government and revenues of India. He has the power of giving orders to every officer in India, including the Governor-General, and is in charge of all business relating to India which is transacted in the United Kingdom.

Secretary of State's Powers.

Of these wide powers and duties many rest on his personal responsibility; others can be performed only in consultation with his Council, and for some of these the concurrence of a majority of the members of his Council is required. The Secretary of State may act without consulting the Council in all matters where he is not expressly required by statute to act as "Secretary of State in Council." Appointments by the Crown are made on his advice. Every official communication proposed to be sent to India must be laid before Council, unless it falls under either of two reserved classes. One of these is "Secret communications" dealing chiefly with war and peace, relations with foreign Powers and Native States. The others are those which he may deem "urgent." No matter for which the concurrence of a majority of Council is necessary can be treated as either "secret" or "urgent." In ordinary business, for which the concurrence of a majority of Council is not required, the Secretary of State is not bound to follow the advice of the Council. These provisions reserve to the Secretary of State a wide discretionary power of interference with the Government of India which is exercised in accordance with the temperament of the Secretary of State for the time being. But in all matters of finance, the authority is that of the Secretary of State and the Council and is freely exercised.

The Council.

The Council of India consists of such number of members, not being less than ten or more than fourteen, as the Secretary of State may from time to time determine. The members hold office for seven years, and this term may, for special reasons of public advantage, which must be laid before Parliament, be extended for five years more. Nine members must be persons who have served or resided in India for at least ten years, and who have not left India more than five years before their appointment. Several of them have usually belonged to the Indian Civil Service, and have been lieutenant-governors of provinces or members of the Viceroy's Executive Council; others are soldiers, bankers, or men of official, or mercantile experience. The object aimed at in the constitution of the Council is to give the Secretary of State, who has little knowledge of the details of the Indian administration, the help of a body of experts. In 1907, in connection with the policy of constitutional reform, two Indians, one a Hindu and the other a Mahomedan, were appointed to vacancies in the Council. Ten years later Mr. Chamberlain raised the number to three—two Hindus a[illegible]edan.

The India Office.

Associated with the Secretary of State and the India Council is a secretariat known as the India Office, housed at Whitehall. Appointments to the establishment are made by the Secretary of State in Council, but "junior situations" must be filled in accordance with the general regulations governing admission to the Home Civil Service.

The whole cost of the India Office is borne by the revenues of India, though the Home Government makes certain grants and remissions in lieu of a direct contribution amounting to £50,000 a year. The total net cost, including pensions is about £250,000 per annum.

All these arrangements may soon undergo substantial revision, for in connexion with the Montagu-Chelmsford Report a Committee has been appointed to investigate questions of the future organisation of the India Office, the relation it should bear to the central and provincial governments in the future and the extent to which and the methods by which it should bear relation to the Imperial Parliament.

Secretary of State.

The Right Hon. Edwin S. Montagu, M.P.

Under-Secretaries of State.

Sir Thomas W. Holderness, G.C.B., K.C.S.I.
The Right Hon. Lord Islington, G.C.M.G., D.S.O.

Assistant Under-Secretaries of State.

Sir Lionel Abrahams, K.C.B.
Sir Arthur Hirtzel, K.C.B.

Council.

Sir William Duke, K.C.S.I., G.C.I.E., C.I.E.
Sir Charles Arnold White.
Sir Murray Hammick, K.C.S.I., C.I.E.
Sir Charles S. Bayley, G.C.I.E., K.C.S.I., I.S.O.
William Didsbury Sheppard, C.I.E.
Sir Marshall Frederick Reid, C.I.E.
General Sir E. G. Barrow, G.C.B., G.C.S.I.
Sir James Bennett Brunyate, K.C.S.I., C.I.E.
Sahibzada Aftab Ahmed Khan.
Sir Prabhashankar D. Pattani, K.C.I.E.
Bhupendranath Basu.
Frederick Cranfurd Goodenough.

Clerk of the Council, Sir Lionel Abrahams, K.C.B.

Deputy Clerk of the Council, James H. Seabrooke, C.I.E.

Private Secretary to the Secretary of State, C. H. Kisch.

Assistant Private Secretaries, A. L. R. Parsons, and Miss Freeth.

Political A.-D.-C. to the Secretary of State, Lieut.-Col. Sir J. R. Dunlop Smith, K.C.S.I., K.C.V.O., C.I.E.

Private Secretary to Sir T. W. Holderness, R. H. A. Carter.

Private Secretary to Lord Islington, R. H. A. Carter.

Correspondence Departments.

SECRETARIES.

Financial, W. Robinson, C.B.C. and F. H. Lucas, C.V.O., C.B.

Judicial and Public, Malcolm C. C. Seton, C.B.

Military, Lieut.-General Sir Herbert V. Cox, K.C.M.G., C.B., C.S.I., and J. H. Seabrooke, C.I.E.

Political and Secret, J. E. Shuckburgh, C.B.

Public Works, Hermann A. Haines.

Revenue and Statistics, L. J. Kershaw, C.S.I., C.I.E.

Director-in-Chief of the Indo-European Telegraph, Public Works Department, R. C. Barker, C.I.E.

ACCOUNTANT-GENERAL'S DEPARTMENT:—

Accountant-General, Walter Badock, C.S.I., *also Director of Funds and Official Agent to Administrators-General in India.*

STORE-DEPARTMENT—INDIA OFFICE BRANCH:—*Director-General*, George H. Collier, C.I.E.

INDIA STORE DEPOT, *Belvedere Road, Lambeth, S. E. Superintendent*, Captain G. T. Wingfield, R. N.

REGISTRY AND RECORD DEPARTMENT.—*Registrar and Superintendent of Records*, W. Foster, C.I.E.

Auditor, H. A. Cooper.

Miscellaneous Appointments.

Government Director of Railway Companies, Sir H. P. Burt, K.C.I.E.

Librarian, Fredk. W. Thomas, M.A.

Educational Adviser for Indian Students, T. W. Arnold, C.I.E., Litt. D., M.A.

Local Adviser to Indian Students in London, Mr. N. C. Sen (21, Cromwell Rd., S.W. 7).

President of Medical Board for the Examination of Officers of the Indian Services and Adviser to the Secretary of State on Medical matters, Surg.-Gen. Sir R. H. Charles, G.C.V.O., M.D., I.M.S. (retd.), F.R.C.S.I.; *Member of the Medical Board*, Lt.-Col. J. Anderson, C.I.E., I.M.S. (retd.)

Legal Adviser and Solicitor to Secretary of State, Sir Edward Chamier.

Inspector of Military Equipment and Clothing, Major-Gen. Sir John Steevens, K.C.B.

Surveyor and Clerk of the Works, T. H. Winny, A.R.I.B.A.

Ordnance Consulting Officer, Col. M.S.C. Campbell, C.I.E., R.A.

Officers of the Indian Army attached to the India Office, Colonel S. D. Gordon, Lieut.-Colonel S. S. W. Paddon, and Lieut. J. Flint, M.C.

Consulting Engineers, Messrs. Rendel, Palmer and Tritton.

Stockbroker, Horace Hubert Scott.

Secretaries of State for India.

	Assumed charge
Lord Stanley, P.C. (*a*)	1858
Sir Charles Wood, Bart. (*b*)	1859
Earl de Grey and Ripon, P.C. (*c*) ..	1866
Viscount Cranborne (*d*)	1866
Sir Stafford Northcote, Bart. (*e*)	1867
The Duke of Argyll, K.T., P.C.	1868
The Marquis of Salisbury, P.C. (2nd time)	1874
Gathorne Haddy, P.C., created Viscount Cranbrook, 14 May, 1878 (*f*)	1878
The Marquis of Hartington, P.C. (*g*) ..	1880
The Earl of Kimberly, P.C.	1882
Lord Randolph Churchill, P.C.	1885
The Earl of Kimberley, K.G., P.C. (2nd time)	1886
Sir Richard Assheton Cross, G.C.B., P.C., created Viscount Cross, 19 Aug., 1886	1886
The Earl of Kimberley, K.G., P.C. (3rd time)	1892
H. H. Fowler (*h*)	1894
Lord George F. Hamilton, P.C.	1895
St. John Brodrick (*i*)	1903
John Morley, O.M. (*j*)	1905
The Earl of Crewe, K.G.	1910
Viscount Morley of Blackburn, O.M. ..	1911
The Earl of Crewe, K.G. (*k*)	1911
Austen Chamberlain, M.P.	1915
E. S. Montagu, M.P.	1917

(*a*) Afterwards (by succession) Earl of Derby.

(*b*) ,, (by creation) Viscount Halifax.

(*c*) ,, (by creation) Marquess of Ripon.

(*d*) ,, (by succession) Marquess of Salisbury.

(*e*) ,, (by creation) Earl of Iddesleigh.

(*f*) ,, (by creation) Earl Cranbrook.

(*g*) ,, (by succession) Duke of Devonshire.

(*h*) ,, (by creation) Viscount Wolverhampton, G.C.S.I.

(*i*) ,, (by succession) Viscount Midleton.

(*j*) ,, (by creation) Viscount Morley of Blackburn, O.M.

(*k*) ,, (by creation) Marquess of Crewe, K.G.

The Provincial Governments.

British India is divided into eight large provinces and six lesser charges, each of which is termed a Local Government. The eight major provinces are the Presidencies of Madras, Bombay, and Bengal; the Lieutenant-Governorships of the United Provinces, The Punjab, Burma, and Behar; and the Chief Commissionership of the Central Provinces. The minor provinces are Assam, the North-West Frontier Province, Baluchistan, Coorg, Ajmere Merwara and the Andaman Islands. The original division of British authority in India was between the Presidencies of Bengal, Madras and Bombay. Bengal afterwards developed into and was separated from the Government of India and then was gradually divided into provinces as the tide of conquest brought under administration areas too large to be controlled by a single authority. The status and area of these provinces have been varied from time to time to meet the changed conditions of the day. The most recent of these changes was the separation of the North-West Frontier from the Punjab in 1901; the division of Bengal into two provinces in 1905; and the final adjustment made in accordance with His Majesty the King's announcement at the Durbar of 1911, whereby the newly-created province of Eastern Bengal and Assam disappeared, and Bengal was re-divided into the Presidency of Bengal, the Lieutenant-Governorship of Behar and Orissa, and the Chief Commissionership of Assam, whilst the headquarters of the Government of India were moved from Calcutta to Delhi, and the City of Delhi, with an *enclave* of territory surrounding it, was taken under the direct administration of the Government of India. All Local Governments alike are under the superintendence and control of the Governor-General in Council. They must obey orders received from him, and they must communicate to him their own proceedings. But each Local Government is the Executive head of the administration within the province. By custom, all appointments to Local Governments are for a term of five years.

The Three Classes.

The three Presidencies occupy a superior position. The Civil administration of each is vested in a Governor-in-Council, appointed by the Crown, and usually drawn from English public life. On certain matters they correspond directly with the Secretary of State, a privilege not possessed by other provincial Governments. The Governors are assisted by a Council composed of three members, two members of the Civil Service and, under the Indian Councils Act of 1909, a fourth member who is usually an Indian. Like the Governor-General they are addressed as Your Excellency, and they are escorted by a body-guard. The maximum salaries as fixed by Act of Parliament are Rs. 1,20,000 for a Governor and Rs. 64,000 for a member of Council.

Lieutenant-Governors are appointed by the Governor-General subject to the approbation of the Crown. They must have served for at least ten years in India. Under the Indian Councils Act power was taken to create executive councils in the Lieutenant-Governorships and this has been applied to Behar where the Lieutenant-Governor is assisted by a Council consisting of two members of the Civil Service and one Indian. Lieutenant-Governors are addressed as Your Honour. Their maximum salary, Rs. 1,00,000, is fixed by Act of Parliament.

Chief Commissioners stand upon a lower footing, being delegates of the Governor-General-in-Council. In theory, a Chief Commissioner administers his province on behalf of the Governor-General-in-Council, who may resume or modify the powers that he has himself conferred. In practice, the powers entrusted to Chief Commissioner of the Central Provinces are as wide as those exercised by a Lieutenant-Governor. The salary of a Chief Commissioner is Rs. 50,000 but in the case of the Central Provinces this was raised to Rs. 62,000 in consideration of the addition of Berar to his Government.

Provincial Councils.

The changes made in the constitution and non-legislative functions of the Legislative Councils of Madras and Bombay by the Act of 1909 more than doubled the number of members, election by specially constituted electorates was introduced, and powers were given to members to debate and move resolutions on the provincial financial statements, to move resolutions on matters of general public interest, and to ask supplementary questions. A description of the system in Bombay will show how the scheme works. The Bombay Legislative Council is composed of four ex-officio members (the three members of the Executive Council and the Advocate-General) and 44 additional members. Of the additional members the Governor nominates twenty-three (of whom not more than fourteen may be officials) and 21 are elected. The Government is thus without a majority of officials in the Council. Of the elected members, eight are elected by groups of municipalities and the District Boards, four by Mahomedan electorates, and three by electorates of the land-holding classes. The Bombay University, the Bombay Municipal Corporation, the Bombay Chamber of Commerce, the Karachi Chamber of Commerce, and the Mill-owner's Association, and the Indian Commercial Community, each elect one member. The regulations for the formation of electorates; and as to the qualifications and disqualifications of candidates and voters, are similar to those made in the case of the Supreme Council.

The rules for the discussion of the annual financial statement are similar to those applicable to the Supreme Council. The Financial Statement is presented and considered as a whole and then in detail, and resolutions may be moved. The Government is not bound by any resolutions which the Council may pass. Matters of general public interest under the control of Local Governments may be made the subject of resolutions. Laws passed by these Legislative Councils require the sanction of the Governor-General and may be disallowed by the Crown.

In constitution, in functions, and in the system of special electorates, the Legislative Councils in the Lieutenant-Governorships resemble in all the essential particulars the Legislative Council of Bombay

The Secretariat.

Each Local Government works through a Secretariat, which is divided into various departments, each under a Secretary. In addition to the Secretaries, there are special departmental heads such as the Inspectors General of Police, Jails, and Registration: the Director of Public Instruction, the Inspector-General of Civil Hospitals or Surgeon-General, the Sanitary Commissioner and the Superintendent of the Civil Veterinary Department. There are also Chief Engineers for Public Works and Irrigation, who are likewise Secretaries to Government. In nearly all the Provinces except Bombay, the revenue departments are administered, under Government, by a Board of Revenue.

The District Officer.

The administrative system is based on the repeated sub-division of territory, each administrative area being in the responsible charge of an officer who is subordinate to the officer next in rank above him. The most important of these units is the District, and India embraces more than 250 Districts, with an average area of 4,430 square miles and an average population of 931,000. In Madras there is no local officer above the head of the District: elsewhere a Commissioner has the supervision of a Division comprising from four to six Districts. The head of a District is styled either the Collector and District Magistrate or the Deputy Commissioner. He is the representative of the Government and embodies the power of the State. He is concerned in the first place with the land and the land revenue. He has also charge of the local administration of the excise, income tax, stamp duty and other sources of revenue. As a Magistrate of the first class, he can imprison for two years and fine up to a thousand rupees. In practice he does not try many criminal cases, although he supervises the work of the other Magistrates in the District.

In addition to these two main departments, the Collector is interested in all matters pertaining to the welfare of the people. In some branches of the administration his functions are, in consequence of the formation of special departments, such as those of Public Works, Forests, Jails, Sanitation, and Education less direct than was formerly the case. But even in matters dealt with by separate departments, his active co-operation and direction in counsel are needed. The Municipal Government of all considerable towns is vested in Municipalities but it is the duty of the Collector to guide and control their working. He is usually the Chairman of the District Board which, with the aid of subsidiary boards, maintains roads, schools and dispensaries, and carries out sanitary improvements in rural areas.

Other Officers.

Other important district officers are the Superintendent of Police, who is responsible for the discipline and working of the police force, and the Civil Surgeon, who (except in Bombay) is the head of the medical and sanitary administration. The local organisation of Government Public Works, Forests, Education and other special departments varies in different parts of the country. Each District has its own law officer, styled the Government Pleader.

The Districts are split up into sub-divisions; under Junior Officers of the Indian Civil Service or members of the Provincial Service called Deputy Collectors. In Madras, Bombay and the United Provinces there are smaller sub-district units called taluks or tahsils, administered by tahsildars (Bombay Mamlatdars), with naib tahsildars or mahalkarris. The tahsildar is assisted by subordinate officers, styled revenue inspectors or kanungos and the village officers. The most important of the latter are the headman who collects the revenue, the karnam, karkun or patwari who keeps the village accounts, and the chaukidar or village watchman.

Trend of Provincial Government.

The relations of the Provincial administrations with the Government of India form the subject of incessant discussion. On the one side there are the strong centralisers who would focus all authority in the Government of India; on the others those stout advocates of provincial autonomy who would make the Local Governments virtually independent of the Government of India. The trend of Indian policy since the departure of Lord Curzon has been steadily in the direction of increasing the authority of the Provincial Governments and the control and interference of the Government of India has been materially reduced, especially in financial matters. There was a marked development of this policy adumbrated in the despatch of the Government of India which submitted to the Secretary of State the proposal to remove the headquarters of the Government of India from Calcutta to Delhi. This paragraph thus indicated the ideas of the supreme authorities; although the extreme interpretation placed upon it by some Indian publicists had to be repudiated, it remains the most authoritative exposition of the trend of Indian policy.

The maintenance of British rule in India depends on the ultimate supremacy of the Governor-General in Council, and the Indian Councils Act of 1909, itself bears testimony to the impossibility of allowing matters of vital concern to be decided by a majority of non-official votes in the Imperial Legislative Council. Nevertheless it is certain that, in the course of time, the just demands of Indians for a larger share in the government of the country will have to be satisfied, and the question will be how this devolution of power can be conceded without impairing the supreme authority of the Governor General in Council. The only possible solution of the difficulty would appear to be gradually to give the Provinces a larger measure of self-Government, until at last India would consist of a number of administrations, autonomous in all provincial affairs, with the Government of India, above them all, and possessing power to interfere in case of misgovernment, but ordinarily restricting their functions to matters of Imperial concern. In order that this consummation may be attained, it is essential that the supreme Government should not be associated with any particular Provincial Government. The removal of the Government of India from Calcutta is, therefore, a measure which will, in our opinion, materially facilitate the growth of Local Self-Government on sound and safe lines. It is generally recognised that the capital of a great central Government should be separate and independent, and effect has been given to this principle in the United States, Canada and Australia."

Administrative Divisions.

Provinces.	No. of Districts.	Area in Square miles.	Population (1911).
Ajmer Merwara	2	2,711	501,395
Andamans and Nicobars	....	3,143	26,459
Assam	12	52,959	6,713,635
Baluchistan	6	45,804	414,412
Bengal	28	78,412	45,483,077
Bihar and Orissa	21	83,205	34,490,084
Bombay (Presidency)	26	123,064	19,672,642
Bombay	26	75,918	16,113,042
Sind	6	47,066	3,513,435
Aden	....	80	46,165
Burma	41	236,738	12,115,217
Central Provinces and Berar	22	100,345	13,916,308
Coorg	1	1,582	174,976
Madras	24	141,726	41,405,404
North-West Frontier Province (Districts and administered Territories)	5	16,466	2,196,933
Punjab	29	97,209	19,974,956
United Provinces of Agra & Oudh	48	107,164	47,182,044
Agra	36	83,198	34,624,040
Oudh	12	23,966	12,558,004
Total British Territory	267	1,097,901	244,267,542

States and Agencies.	No. of Districts.	Area in Square miles.	Population (1911).
Baluchistan States	....	86,511	396,432
Baroda State	....	8,099	2,032,798
Bengal States	....	32,773	4,538,161
Bombay States	....	65,761	7,411,567
Central India Agency	....	78,772	9,356,980
Central Provinces States	....	31,188	2,117,002
Eastern Bengal and Assam States	....	....	575,835
Hyderabad State	....	82,698	13,374,676
Kashmir State	....	80,900	3,158,126
Madras States	....	9,969	4,811,841
Cochin State	....	....	918,110
Travancore State	....	....	3,428,975
Mysore State	....	29,444	5,806,193
North-West Frontier Province Agencies and Tribal areas).	....	....	1,622,094
Punjab States	....	36,532	4,212,794
Rajputana Agency	....	127,541	10,530,432
Sikkim	....	....	87,920
United Provinces States	....	5,079	832,036
Total Native States	....	675,267	70,864,995
Grand Total, India	....	1,773,168	315,132,537

The Bombay Presidency.

The Bombay Presidency stretches along the west coast of India, from Sind in the North to Kanara in the South. It embraces, with its feudatories and Aden, an area of 186,923 square miles and a population of 27,084,317. Of this total 65,761 square miles are in Native States, with a population of 7,411,675. Geographically included in the Presidency but under the Government of India is the first class Native State of Baroda, with an area of 8,182 square miles and a population of 2,032,798. The outlying post of Aden is under the jurisdiction of the Bombay Government: it has an area of 80 square miles and a population of 46,165.

The Presidency embraces a wide diversity of soil, climate and people. In the Presidency Proper are the rich plains of Gujarat, watered by the Nerbudda and the Tapti, whose fertility is so marked that it has long been known as the Garden of India. South of Bombay City the province is divided into two sections by the Western Ghats, a range of hills running parallel to the coast. Above Ghats are the Deccan Districts, with a poor soil and an arid climate, south of these come the Karnatic districts. On the sea side of the Ghats is the Konkan, a rice-growing tract, intercepted by creeks which make communication difficult. Then in the far north is Sind, totally different from the Presidency Proper, a land of wide and monotonous desert except where irrigation from the Indus has brought abounding fertility.

The People.

The population varies as markedly as soil and climate. In Sind Mahomedans predominate. Gujarat has remained true to Hinduism although long under the dominion of powerful Mahomedan kings. Here there is an amplitude of caste divisions, and a people, who although softened by prosperity, are amongst the keenest trading races in the world. The Deccan peasant has been seasoned by adversity; the saying goes that the Deccan expects a famine one year in every three, and gets it; the population is much more homogeneous than in Gujarat, and thirty per cent. are Mahrattas. The Karnatic is the land of the Lingayets, a Hindu reforming sect of the twelfth century, and in the Konkan there is a large proportion of Christians. Four main languages are spoken, Sindi, Gujarati, Marathi and Kanarese, with Urdu a rough *lingua franca* where English has not penetrated. The main castes and tribes number five hundred.

Industries.

The principal industry is agriculture, which supports sixty-four per cent. of the population. In Sind the soils are wholly alluvial, and under the influence of irrigation produce yearly increasing crops of wheat and cotton. In Gujarat they are of two classes, the black cotton soil, which yields the famous Broach cottons, the finest in India, and alluvial, which under careful cultivation in Ahmedabad and Kaira makes splendid garden land. The dominant soil characteristic of the Deccan is black soil, which produces cotton, wheat, gram and millet; and in certain tracts rich crops of sugar cane. The Konkan is a rice land, grown under the abundant rains of the submontane regions, and in the south the Dharwar cotton vies with Broach as the best in India. There are no great perennial rivers suitable for irrigation, and the harvest is largely dependent upon the seasonal rainfall, supplemented by well irrigation. A chain of irrigation works, consisting of canals fed from great reservoirs in the region of unfailing rainfall in the Ghats, is gradually being completed, and this will ultimately make the Deccan immune to serious drought. More than any other part of India the Presidency has been scourged by famine and plague during the past twenty years. The evils have not been unmixed, for tribulation has made the people more self-reliant, and the rise in the values of all produce, synchronising with a certain development of industry, has induced a considerable rise in the standard of living. The land is held on what is known as the ryotwari tenure, that is to say, each cultivator holds his land direct from Government under a moderate assessment, and as long as he pays this assessment he cannot be dispossessed.

Manufactures.

Whilst agriculture is the principal industry; others have no inconsiderable place. The mineral wealth of the Presidency is small, and is confined to building stone, salt extracted from the sea, and a little manganese. But the handicrafts are widely distributed. The handloom weavers produce bright-coloured saris, and to a diminishing extent the exquisite kincobs of Ahmedabad and Surat. Bombay silver ware has a place of its own, as well as the brass work of Poona and Nasik. But the tendency is to submerge the indigenous handicrafts beneath industry organised on modern lines. Bombay is the great centre in India of the textile trade. This is chiefly found in the headquarter city, Bombay, where the industry embraces 29,33,775 spindles and 57,921 looms and employs 1,25,713 hands and consumes 39,71,849 cwts. of cotton. This industry is now flourishing, and is steadily rising in efficiency. In lieu of producing immense quantities of low grade yarn and cloth, chiefly for the China market, the Bombay mills now turn out printed and bleached goods of a quality which improves every year, and the principal market is at home. Whilst the industry centres in Bombay City, there are important offshoots at Ahmedabad, Broach and Sholapur. In Ahmedabad there are 10,48,847 spindles and 20,943 looms; in Sholapur 2,44,164 spindles and 3,982 looms; and in the Presidency 47,14,754 spindles and 91,518 looms. It is expected that the prosperity of the Bombay trade will be quickened, as a project, now in operation, for the substitution of electricity for steam—the electricity is generated at a hydro-electric station in the Ghats, fifty miles distant—furnishes cheap and efficient power. Its situation on the western-sea-board, in touch at once with the principal markets of India and the markets of the west, has given Bombay an immense sea-borne trade. The older ports, Surat, Broach, Cambay and Mandvie, were famous in the ancient days, and their bold and hardy mariners carried Indian commerce to the Persian Gulf and the coasts of Africa. But the opening of the Suez Canal and the increasing size of ocean steamers have tended to concentrate it in modern ports with deep water anchor-

ages; and the sea-borne trade of the Presidency is now concentrated at Bombay and Karachi, although attempts are being made to develop Mormugao, in Portuguese territory, into an outlet for the trade of the Southern Mahratta Country. The foreign trade for the port of Bombay for the year 1917-18 was as follows:—Imports Rs. 5681,36,044; Exports (Indian produce) Rs. 7614,36,629, (foreign merchandise) Rs. 658,75,719.

Administration.

The Presidency is administered by a Governor-in-Council. The Governor is appointed by the Crown, and is usually drawn from the ranks of those who have made their mark in English public life. He is assisted by a Council of three members, two of whom are drawn from the Indian Civil Service, and the third in practice is an Indian. Each Member takes special charge of certain departments, and cases where differences of opinion occur, or of special importance, are decided "in Council." All papers relating to public service business reach Government through the Secretariat, divided into five main departments each under a Secretary (*a*) Revenue and Financial: (*b*) Political, Judicial, and Special: (*c*) General, Educational, Marine and Ecclesiastical: (*d*) Ordinary Public Works: (*e*) Irrigation. The senior of the three Civilian Secretaries is entitled the Chief Secretary. The Government frequently moves. It is in Bombay from November to the end of March; at Mahableshwar from April to June; in Poona from June to September; and at Mahableshwar from October to November; but the Secretariat is always in Bombay. Under the Governor-in-Council the Presidency is administered by four Commissioners. The Commissioner in Sind has considerable independent powers. In the Presidency Proper there are Commissioners for the Northern Division, with headquarters at Ahmedabad; the Central Division at Poona; and the Southern Division at Belgaum. Each district is under a Collector, usually a Covenanted Civilian, who has under him one or more Civilians as Assistant Collectors, and one or more Deputy Collectors. A collectorate contains on an average from eight to ten talukas, each consisting of from one to two hundred villages whose whole revenues belong to the State. The village officers are the patel, who is the head of the village both for revenue and police purpose; the talati or kulkarni, clerk and accountant; the messenger and the watchman. Over each Taluka or group of village is the mamlatdar, who is also a subordinate magistrate. The charge of the Assistant Deputy Collector contains three or four talukas. The Collector and Magistrate is over the whole District. The Commissioners exercise general control over the Districts in their Divisions. The control of the Government over the Native States of the Presidency is exercised through Political Agents.

Justice.

The administration of justice is entrusted to the High Court sitting in Bombay, and comprising a Chief Justice, who is a barrister, and six puisne judges, either Civilians, Barristers, or Indian lawyers. In Sind the Court of the Judicial Commissioner (three judges, one of whom must be a barrister) is the highest court of civil and criminal appeal. Of the lower civil courts the court of the first instance is that of the Subordinate Judge recruited from the ranks of the local lawyers. The Court of first appeal is that of the District or Assistant Judge, or of a first class subordinate judge with special powers. District and Assistant Judges are Indian Civilians, or members of the Provincial Service. In cases exceeding Rs. 5,000 in value an appeal from the decision of the Subordinate or Assistant Judge and from the decision of the District Judge in all original suits lies to the High Court. District and Assistant Judges exercise criminal jurisdiction throughout the Presidency, but original criminal work is chiefly disposed of by the Executive District Officers. Capital sentences are subject to confirmation by the High Court. In some of the principal cities Special Magistrates exercise summary jurisdiction (Bombay has four Presidency Magistrates, as well as Honorary Magistrates exercising the functions of English Justices of the Peace) and a Court of Small Causes, corresponding to the English Country Courts.

Local Government.

Local control over certain branches of the administration is secured by the constitution of local boards and municipalities, the former exercising authority over a District or a Taluka, and the latter over a city or town. These bodies are composed of members either nominated by Government or elected by the people, who are empowered to expend the funds at their disposal on education, sanitation, the construction of roads and tanks, and general improvements. Their funds are derived from cesses on the land revenue, the toll and ferry funds. The tendency of recent years has been to increase the elective and reduce the nominated element, to allow these bodies to elect their own chairmen, whilst large grants have been made from the general revenues for water supply and drainage.

Finance.

The finance of the provincial governments is marked by definite steps toward provincial financial autonomy. Up to 1870 there was one common purse for all India. Since then progressive steps have been taken to increase the independence of local Governments. Broadly, certain heads of revenue are divided with the Imperial Government, whilst certain growing heads of revenue, varying in each province, are allotted to the local Government. Thus in Bombay the land revenue, stamp revenue and revenue from assessed taxes are divided with the Government of India. All other local sources of revenue go intact to the local Government. The provincial Budget for 1918-19 shows an opening balance of Rs. 393 lakhs, revenue 903 lakhs, expenditure 868 lakhs and the closing balance Rs. 428 lakhs. These large balances are due to grants from the Imperial Governments for non-recurring expenditure.

Public Works.

The Public Works Department is under the control of two Chief Engineers who act as Secretaries to the Government; one for General Works and the other for Irrigation

Under them are Superintending Engineers in charge of divisions and Executive Engineers in charge of districts, with the Consulting Architect. The chief irrigation works are in Sind and consist of a chain of canals fed by the annual inundations from the Indus and one perennial canal the Jamrao. In the Presidency proper the principal protective works are the Nera Canal, Gokak Canal, Mutha Canal and the Godaveri Canal Scheme. In addition there is under construction a chain of protective irrigation works, originating in reservoirs in the Ghat regions. The first of these the Godavari Scheme, is now in operation, the Pravara Scheme and the Nira Scheme are progressing steadily. The Public Works budget for the current year is 123 lakhs of rupees.

Police.

The Police Force is divided into three categories: District Police, Railway Police and the Bombay City Police. The District Police are under the Inspector-General who is either a member of the Gazetted Force or a Covenanted Civilian. Under him are the Deputy Inspector-Generals for Sind and the Northern and Southern Ranges of the Presidency proper, for Railways and for Criminal Investigation. District Superintendents of Police have charge of each District with a regular cadre comprising Assistant Superintendents, Sub-Inspectors, Chief Constables and Constables. The Bombay City Police is a separate force maintained by Government under a Commissioner who is responsible direct to Government. The Training School at Nasik prepares young gazetted officers and the rank and file for their duties. The cost of the Police is 114 lakhs.

Education.

Education is imparted partly through direct Government agency, partly through the medium of grants-in-aid. Government maintain Arts Colleges at Bombay, Poona and Gujarat; the Grant Medical College, the Poona College of Science, the Agricultural College, Veterinary College, School of Art, Law School and a College of Commerce. A Science College in Bombay is now in course of construction. Also in Bombay City, and the headquarters of each district, a model secondary school. The other secondary schools are in private hands; the majority of the primary schools are maintained by District and Local Boards with a grant-in-aid. The Bombay Municipality is responsible for primary education in Bombay City. There are now in the Presidency 7 Arts Colleges 4,702 Scholars; 142 High Schools; 42,215, Scholars; 323 Middle Schools, 25,934 Scholars and 10,890 Primary Schools, 6,70,141 Scholars. The Government Educational Budget is 106 lakhs.

The Educational Department is administered by a Director, with an Inspector in each Division and a Deputy Inspector with Assistants in each district. Higher education is controlled by the Bombay University (established in 1857) consisting of the Chancellor (the Governor of the Presidency), the Vice-Chancellor (appointed by Government for two years), and 110 Fellows of whom 10 are *ex-officio*; 10 elected by the Graduates, 10 by the Faculties, and 80 are nominated by the Chancellor.

The principal educational institutions are:—

Government Arts Colleges—

Elphinstone College, Bombay, Principal. Covernton.

Deccan College, Poona, Principal. Mr. F. W. Bain.

Gujarat College, Ahmedabad, Principal, the Rev. W. G. Robertson.

Dharwar College, Principal, Mr. H. G. Rawlinson.

Private Arts Colleges—

St. Xaviers, Bombay (Society of Jesus), Principal, Rev. Father Goodier.

Wilson College, Bombay (Scottish Mission), Principal, Rev. Dr. Mackichan.

Ferguson College, Poona (Deccan Educational Society), Principal, the Hon'ble Mr. R. P. Paranjpe.

Baroda College, Baroda (Baroda State), Principal Mr. Clarke.

Samaldas College, Bhavnagar (Bhavnagar State), Principal, Mr. Unwalla.

Bahauddinbhai College, Junagadh State, Principal, Mr. Scott.

Special Colleges—

Grant Medical College, Bombay (Government), Principal, Lt.-Col. Street, I.M.S.

College of Science, Poona (Government). Principal, Dr. Allen.

Agricultural College, Poona (Government), Principal, Dr. Harold Mann.

Chiefs' College, Rajkot, Principal, Mr. Mayne.

College of Science, Ahmedabad.

Law School, Bombay, Principal, Mirza Ali Akbar Khan.

College of Commerce, Bombay, Principal, Mr. P. Anstey.

Veterinary College, Bombay, Mr. K. Hewlett.

Bombay Bacteriological Laboratory, Director, Lt.-Col. Glen Liston, C.I.E., I.M.S.

Sir J. J. School of Art, Bombay (Government), Principal, Mr. Hoggarth.

Victoria Technical Institute, Bombay, Principal. Mr. T. Dawson.

Medical.

The Medical Department is in charge of the Surgeon-General and Sanitation of the Sanitary Commissioner, both members of the Indian Medical Service. Civil Surgeons stationed at each district headquarters are responsible for the medical work of the district, whilst sanitation is entrusted to one of the Deputy Sanitary Commissioners. Three large hospitals are maintained by the Government in Bombay, and well-equipped hospitals exist in all important up-country stations. Over four million persons including 67,000 in-patients are treated annually. The Presidency contains 7 Lunatic Asylums and 16 institutions for the treatment of Lepers. Vaccination is

carried out by a staff under the direction of the Sanitary Commissioner. Sanitary work has received an immense stimulus from the large grants made by the Government of India out of the opium surpluses. The Budget is 22·9 lakhs.

Governor and President in Council.

His Excellency The Right Hon'ble Sir George Ambrose Lloyd, G.C.I.E., D.S.O. Took his seat 16th December 1918.

Personal Staff.

Private Secy.—William Patrick Cowie, I.C.S.

Mily. Secretary—Lt.-Col. J. G. Greig.

Aide-de-Camp—Major Arkwright.

Honorary Aides-de-Camp—Lt.-Col P. R. Cadell, C.I.E., I.C.S., Commanding 15th Bombay Battalion, Indian Defence Force; Capt. E. W. Huddleston, C.I.E., R.I.M; Meherban Abdul Majid Khan Dil r Jang Bahadur, Nawab of Savanur; Maharawal Shri Ranjitsinhji, Raja of Baria; Meherban Sir Parashramrao Ramchandrarao *alias* Bhau Saheb Patwardhan, K.C.I.E., Chief of Jamkhandi; Captain Nigel F. Paton, 15th Bombay Battalion, I. D. F.

Indian Aide-de-Camp—Subadar Major Balkrishna, Rao Bahadur, 110th Mahrattas.

Members of Council.

Mr. George Carmichael, C.S.I., I.C.S.

Mr. G. S. Curtis, C.S.I., I.C.S.

Sir Ibrahim Rahimtoola, Kt., C.I.E.

Additional Members of Council Elected.

Mr. D. V. Belvi, B.A., LL.B. Elected by the Municipalities of the Southern Division.

Mr. G. M. Bhurgri, Bar.-at-Law. Elected by the Jaghirdars and Zamindars of Sind.

Mr. Sidhanath Dhondd o Garud.

Sardar Syed Ali El Edroos. Elected by the Muhammadan Community of the Northern Division.

Mr. Chunilal V. Mehta, M.A. LL.B.

Shaikh G. H. Hidayatallah, LL.B. Elected by the District Local Boards of the Sind Division.

Sardar Shrinivas Coopooswami Mudaliar.

Mr. Montague De Pomeroy Webb, C.I.E., C.B.E.

Mr. G. K. Parekh, B.A., LL.B. Elected by the Municipalities of the Northern Division.

Raosaheb Harilal Desaibhai Desai.

Mr. Raghunath Purushottam Paranjpye.

Mr. Abdul Kadir *alias* Fakir Mohd. *valad* Ibrahim Khan Pathan.

Sardar Dulabawa Raisingji, Thakor of Kerwada. Elected by the Sardars of Gujarat.

Mr. Manmohandas Ramji Hora. Elected by the Indian Commercial Community.

Mr. Sidney Julius Gillum.

Sir Dinshaw Maneckjee Petit, Bart.

Mr. Harchandrai Vishindas, B.A., LL.B.

Mr. Sheriff Devji Kanji.

Mr. Pandurang Anant Desai.

Mr. Ebrahim Haroon Jaffar.

Mr. Shridhar Balkrishna Upasani.

Nominated.

The Advocate-General (*ex-officio*).

Mr. C. N. Seddon, I.C.S.

Mr. S. R. Arthur.

Mr. Salebhai Karimji Barodawala.

Mr. P. R. Cadell.

Mr. J. G. Covernton.

Dr. Cajetan Fernandes.

Dewan Bahadur Kashinath Ramchandra Godbole.

Mr. Muhammad Haji Bhai.

Mr. B. S. Kamat.

Mr. J. D. Jenkins.

Mr. G. F. Keatinge.

Sir Henry Stavely Lawrence, I.C.S.

Mr. Lalubhai Samaldas Mehta, C.I.E.

Rao Bahadur V. S. Naik.

Khan Bahadur Pir Bakhsh *walad* Mian Muhammad.

Mr Frederick G. Pratt, I.C.S.

Mr. Phiroze C. Sethna.

Rao Bahadur G. K. Sathe.

Mr. Purushotamdas Thakurdas.

Surgeon-General R. W. S. Lyons.

Rao Bahadur Tekchand Udhavdas.

SECRETARIES TO GOVERNMENT.

Political, Special and Judicial.—L. Robertson, I.C.S. *Acting*, James Crerar, C.I.E., I.C.S.

J. E. C. Jukes, I.C.S., *Dy. Secretary, Judicial and Political Department* (Temporary).

Revenue, Financial and Separate.—The Hon'ble Mr. Patrick Robert Cadell, C.I.E., I.C.S.

General, Educational, Marine and Ecclesiastical.—George Arthur Thomas, B.A., I.C.S.

Legal Department and Remembrancer of Legal Affairs.—George Douglas French B.A., I.C.S.

Public Works Department.—Frederick St. John Gebbie (Ag.) and R. J. Kent (*Acting Joint Secretary*).

MISCELLANEOUS APPOINTMENTS (S. C.)

Advocate-General, The Hon. Mr. T.J. Strangman.

Inspector-General of Police, W. L. Berkeley Souter, C.I.E.

Director of Public Instruction, The Hon. Mr. J. G. Covernton, C.I.E.

Surgeon-General, The Hon. Surgeon-General R. W. S. Lyons, I.M.S.

Oriental Translator, Muhammad Kadir Shaikh.

Talukdari Settlement Officer, R. G. Gordon, I.C.S.

Settlement Commissioner and Director of Land Records, F. G. H. Anderson.

Director of Agriculture and Co-operative Societies, G. F. Keatinge, C.I.E.

Registrar of Co-operative Societies, R. B. Ewbank.

Municipal Commissioner, Bombay, P. W. Monie.

Sheriff, Sir Cowasji Jehangir, Bart.

Vice-Chancellor, Bombay University, Chimanlal H. Setalvad.

Registrar, Bombay University, Fardunji Dastur.

Commissioner of Police, Bombay, F. A. M. Vincent, C.V.O.

Sanitary Commissioner, Lieut.-Col. F. H. G. Hutchinson.

Accountant-General (Acting), C. W. C. Carson.

Inspector-General of Prisons, Lt.-Col. J. Jackson, I.M.S.

Postmaster-General, Henry Norton Hutchinson, O.B.E., I.C.S.

Commissioner of Customs, Salt, Opium and Excise, S. R. Arthur.

Collector of Customs, Bombay, P. Eccles, I.C.S.

Consulting Architect, G. W. Wittet.

GOVERNORS OF BOMBAY.

Sir Abraham Shipman 1662
Died on the island of Anjediva in Oct. 1664

Humfrey Cooke 1665

Sir Gervase Lucas 1666
Died, 21st May, 1667.

Captain Henry Garey (*Officiating*) .. 1667

Sir George Oxenden 1668
Died in Surat, 14th July, 1669.

Gerald Aungier 1669
Died in Surat, 30th June, 1677.

Thomas Rolt 1677

Sir John Child, Bart. 1681

Bartholomew Harris 1690
Died in Surat, 10th May, 1694.

Daniel Annesley (*Officiating*) 1694

Sir John Gayer 1694

Sir Nicholas Waite.. 1704

William Aislabie 1708

Stephen Strutt (*Officiating*) 1715

Charles Boone 1715

William Phipps 1722

Robert Cowan 1729
Dismissed.

John Horne 1734

Stephen Law 1739

John Geekie (*Officiating*) 1742

William Wake 1742

Richard Bourchier.. 1750

Charles Crommelin.. 1760

Thomas Hodges 1767
Died, 23rd February, 1771.

William Hornby 1771

Rawson Hart Boddam 1784

Rawson Hart Boddam 1785

Andrew Ramsay (*Officiating*) 1788

Major-General William Medows 1788

Major-General Sir Robert Abercromby, K.C.B (*a*). 1790

George Dick (*Officiating*) 1792

John Griffith (*Officiating*).. 1795

Jonathan Duncan 1795
Died, 11th August, 1811.

George Brown (*Officiating*) 1811

Sir Evan Nepean, Bart. 1812

The Hon. Mountstuart Elphinstone .. 1819

Major-General Sir John Malcolm, G.C.B. 1827

Lieut.-General Sir Thomas Sidney Beckwith, K.C.B. 1830
Died, 15th January, 1831.

John Romer (*Officiating*) 1831

The Earl of Clare 1831

Sir Robert Grant, G.C.H. 1835
Died, 9th July, 1838.

James Farish (*Officiating*) 1838

Sir J. Rivett-Carnac, Bart. 1839

Sir William Hay Macnaghten, Bart. (*b*) . ..

George William Anderson (*Officiating*) .. 1841

Sir George Arthur, Bart., K.C.H. 1842

Lestock Robert Reid (*Officiating*) .. 1846

George Russell Clerk 1847

Viscount Falkland 1848

Lord Elphinstone. G.C.H., P.C. 1853

Sir George Russel Clerk, K.C.B. (2nd time) 1860

Sir Henry Bartle Edward Frere, K.C.B. 1862

The Right Hon. William Robert Seymour Vesey FitzGerald. 1867

Sir Philip Edmond Wodehouse, K.C.B. .. 1872

Sir Richard Temple, Bart., K.C.S.I. .. 1877

Lionel Robert Ashburner, C.S.I. (*Acting*).. 1880

The Right Hon. Sir James Fergusson, Bart., K.C.M.G. 1880

James Braithwaite Peile, C.S.I. (*Acting*).. 1885

Baron Reay 1885

Baron Harris 1890

Herbert Mills Birdwood, C.S.I. (*Acting*) .. 1895

Baron Sandhurst 1895

Baron Northcote, C.B. 1900

Sir James Monteath, K.C.S.I. (*Acting*) .. 1903

Baron Lamington, G.C.M.G., G.C.I.E. .. 1903

J. W. P. Muir-Mackenzie, C.S.I. (*Acting*). 1907

Sir George Sydenham Clarke, G.C.M.G., G.C.I.E. (*c*). 1907

Baron Willingdon, G.C.I.E. 1913

Sir George Ambrose Lloyd 1918

(*a*) Proceeded to Madras on duty in Aug., 1793, and then joined the Council of the Governor-General as Commander-in-Chief in India on the 28th Oct., 1793.

(*b*) Was appointed Governor of Bombay by the Honourable the Court of Directors on the 4th Aug., 1841, but, before he could take charge of his appointment, he was assassinated in Cabul on the 23rd Dec., 1841.

(*c*) Afterwards (by creation) Baron Sydenham.

The Madras Presidency.

The Madras Presidency, officially the Presidency of Fort St George, together with the Native States, occupies the whole southern portion of the peninsula, and, excluding the Native States, has an area of 141,075 square miles. It has on the east, on the Bay of Bengal, a coast-line of about 1,200 miles; on the west, on the Indian Ocean, a coast-line of about 450 miles. In all this extent of coast, however, there is not a single natural harbour of any importance; the ports, with the exception of Madras, which has an artificial harbour, are merely open roadsteads. A plateau, varying in height above sea-level from about 1,000 to about 3,000 ft., and stretching northwards from the Nilgiri Hills, occupies the central area of the Presidency; on either side are the Eastern and the Western Ghats, which meet in the Nilgiris. The height of the western mountain-chain has an important effect on the rainfall. Where the chain is high, the intercepted rain-clouds give a heavy fall, which may amount to 150 inches, on the seaward side, but comparatively little rain falls on the landward side of the range. Where the chain is low, rain-clouds are not checked in their westward course. In the central tableland and on the east coast the rainfall is small and the heat in summer excessive. The rivers, which flow from west to east, in their earlier course drain rather than irrigate the country; but the deltas of the Godaveri, Kistna and Cauvery are productive of fair crops even in time of drought and are the only portions of the east coast where agriculture is not dependent on a rainfall rarely exceeding 40 inches and apt to be untimely.

Population.

The population of the Presidency in 1911 was 41,402,000 and that of the Native States was 4,813,000. Hindus account for 89 per cent., Mahomedans for 6, Christians for 3, and Animists for 2. The vast majority of the population is of Dravidian race, and the principal Dravidian languages, Tamil and Telugu, are spoken by 15 and 14 million persons, respectively. Of every 1,000 people, 407 speak Tamil, 377 speak Telugu, 74 Malayalam, 37 Canarese and 23 Hindustani. It is remarkable that of the 41 millions of population all but quarter of a million belong to it by birth.

Agriculture.

About 68 per cent. of the population is occupied in Agriculture. About 49 per cent. having a direct interest as land-owners or tenants. About 86 per cent. of the cultivated acre is under food crops, the principal being rice (10·7 million acres), cholum or great millet (5·8 million acres), spiked millet (3·3 million acres) and ragi or millet (2·5 million acres) 24,023 acres are under wheat, 3,079 acres are under barley. About 3·2 million acres are under oil seeds, about 2·7 million acres are under cotton, 26,822 acres are under tea and 43,522 acres are under coffee. Irrigation is unnecessary on the West Coast but on the East about 30·5 per cent. of the cultivated area has ordinarily to be irrigated. Irrigation works include 28,896 tanks, 6,164 river channels, 6,114 spring channels, 1,291 anicuts, 391,659 ayakat wells and 215,736 supplemental wells. The recent progress of the application of machinery to irrigation on a small scale has been remarkable.

Industries.

Comparative poverty in readily exploitable mineral wealth and the difficulty of coal supply prohibit very large industrial development in the Presidency, but excellent work, both in reviving decadent industries and testing new ones, has been done under Government auspices. The only indigenous art employing a considerable number of workers is weaving. There is no system of regular registration in vogue, and the figures given can be regarded only as approximate, but returns show a total of 1,231 factories driven by engines of an aggregate H. P. of 33,417. Of these factories 179 are concerned with cotton.

Trade.

The total value of the seaborne trade of the Madras Presidency in 1916-17 was nearly 5,455 lakhs, showing an increase of 569 lakhs or 12 per cent. as compared with that of the previous year. Foreign trade continued to feel the effects of the war and in view of the difficulties of obtaining tonnage and the very high rates of freight, coupled with restrictions extended to most commodities and exchange difficulties, it is remarkable that the total volume of the seaborne trade exceeded that of the average for the five years immediately preceding the war. The trade of the United Kingdom with Madras increased both in imports and exports, and this is true also of the United States of America and Japan. The chief port, Madras, accounted for forty-five per cent. of the total trade of the Presidency. The trade of the United Kingdom represented forty-eight per cent. of the total trade. The trade with the British Empire represented seventy-five per cent. of the total trade. Japan contributed mainly to the increase by forty-three per cent. in the trade with Asiatic ports.

Education.

During the year 1916-17 the total number of public institutions rose from 30,474 to 31,276 and their strength from 1,491,945 to 1,534,051. The percentage of male scholars to male population increased from 5.1 in 1911-12 to 6.5 in 1916-17; and the corresponding percentage for female scholars rose from 1.01 to 1.5. The percentage of the number of scholars, male and female, to the total population rose from 3 in 1911-12 to 4 in 1916-17. The total expenditure for the year 1916-17 rose from Rs. 135.6 lakhs to Rs. 216.9 lakhs. Of the total expenditure public funds contributed 53.15 per cent., fees 26.46 per cent., and other sources 20.39 per cent. With the help of special Imperial and Provincial grants the University has been able to enlarge its functions during the past five years. There has been a pronounced tendency to overcrowd the secondary schools in the large towns. The total number of elementary schools, other than those reserved for girls, has risen in the past five years from 24,034 to 28,867; and in the same period the number of boys attending them has increased by 29 per cent. The number of technical schools declined during the five years but the students attending them increased; the most popular courses are drawing and commerce.

Government.

The Madras Presidency is governed on a system generally similar to that obtaining in Bombay and Bengal At the head is the Governor usually selected from the ranks of British public men or of ex-Governors of Colonies; with the Governor is associated an Executive Council of three members two of whom must have served for ten years under the Crown in India, while the third, of whom official experience is not required, is in practice, but not of necessity, an Indian. Madras administration differs, however, in some important respects from that of other major Provinces. There is no intermediate local authority between the Collector of the District and the authorities at headquarters, the Commissioner being unknown in Madras. Part of the power which would be reserved elsewhere for the Commissioner is given to the Collector, whose status is rather higher in Madras than elsewhere, and part is exercised by the Board of Revenue Each member of the Board of Revenue is in fact a Commissioner for specific subjects throughout the Presidency. This conduces to administration by specialists and to the maintenance of equal progress in specific matters in every part of the Presidency, but it leaves the Government without an official who can judge of the general administration of large parts of the country For these and other reasons the Decentralisation Commission recommended that a system of Commissionerships be introduced in Madras.

Finance.

According to the revised estimates for 1917-18 the Presidency's financial position was as follows in lakhs of rupees:—Opening balance, Rs. 152·38; receipts, Rs. 828·95; expenditure, Rs. 787·76; closing balance being Rs. 193·57.

Governor and President-in-Council.

His Excellency the Rt. Hon. Baron Pentland, G.C.I.E., P.C. *Took his seat 30th October*, 1912.

Personal Staff.

Private Secy., T. E. Moir, I.C.S.

Military Secy., Captain W. S. E. Money.

Aides-de-Camp, Capt. Lionel Meredith Peet, Capt. R. G. S. Hale. Commander A. S. Balfour.

Extra Aide-de-Camp, Lt. John Eaton Monins.

Indian Aides-de-Camp, Risaldar Major Malik Sher Bahadur, Hon. Capt. V. S. Alexander, Sirdar Bahadur.

Surgeon, Major Frederick Fenn Elwes, C.I.E., I.M.S.

Commandant of Body Guard, Lt. D. E. Smith, I.A.R.O.

Members of Council.

Divan Bahadur P. Rajagopala Achariyar, C.I.E.
Mr. Lionel Davidson, C.S.I., I.C.S.
Sir A. G. Cardew, K.C.S.I., I.C.S.

Additional Members of Council Elected

Tiruvengada Ranga Achariyar.
Rev. G. Pittendrigh.
A. Suryanarayana Rao Pantulu.
M. Ramchandra Rao Pantulu.
A. Subba Krishna Rao Pantulu.
Pulamati Siva Rao.
A. Subbarayulu Reddiyar.
B. V. Narasimha Aiyar.
K. Sadasiva Bhat.
V. K. Ramanujachariyar.
Krishnaswami Rama Aiyangar.
B. Raja Rajeswara Setupathi, Raja of Ramnad.
Bhupatiraju Venkatapati Raju.
K. Chidambaranatha Mudaliyar.
K. K. Raman Kavalappara Muppil Nayar.
Yaqub Hasan, Saheb Bahadur.
Ahmed Tambi Ghulam Muhiuddin Marakkayar.
J. H. Thonger.
Gordon Fraser.
Sir E. F. Barber.

Nominated.

J. M. Turing.
L. E. Buckley.
H. S. Duncan.
R. A. Graham.
N. E. Marjoribanks.
S. B. Murray.
W. J. Howley.
Diwan Bahadur Raghunatha Rao Ramchandra Rao.
Surg.-Gen. G. G. Giffard, C.S.I., I.M.S.
Arthur Rowland Knapp.
Khan Bahadur Muhammad Aziz-ud-din Hussain.
S. Srinivasa Ayyangar.
Sir Ghulam Muhamad Ali.
The Most Rev. John Aelen.
T. Richmond.
Sir F. J. E. Spring, K.C.I.E.
Rao Bahadur S. C. Ramanathan Chettiyar Muthayya Chetti Annamalai Chettiyar.
Rao Bahadur K. R. Suryanarayanamurti Nayudu Garu.
Sri Sobha Chandra Singh Deo.

SECRETARIES TO GOVERNMENT.

Chief Secretary to Government, C. G. Todhunter, I.C.S., (on leave).
Revenue: (*Acting*) Arthur Rowland Knapp.
Local and Municipal, Education and Legislative, H. G. Stokes, C.I.E., I.C.S.
Public Works (*General*), S. B. Murray.
Joint Secretary, W. J. Howley.

BOARD OF REVENUE.

First Member, L. E. Buckley.
Second Member, Khan Bahadur Mahomed Aziz-uddin Husain Saheb Bahadur, C.I.E., I.S.O.
Third Member, R. A. Graham.
Fourth Member, J. M. Turing.

MISCELLANEOUS APPOINTMENTS.

Commissioner of Revenue Settlement, etc., L. E. Buckley, I.C.S.
Revenue Survey Department, Director, D. G. Hatchell.
Director of Public Instruction, H. S. Duncan, (*Ag.*)
Vice-Chancellor of Madras University, Justice F. P. D. Oldfield.
Registrar of Madras University, F. Dewsbury.

Inspector-General of Police, P. L. Moore, C.I.E., I.C.S.

Surgeon-General, Surgeon-General Gerard Godfrey Giffard, C.S.I.

Sanitary Commissioner, Major W. A. Justice.

Accountant-General, A. Newmarch.

Inspector-General of Prisons, Lt.-Col. Charles Henry Leet-Palk, I.M.S.

Postmaster-General, John Monteath.

Collector of Customs, F. S. Punnett.

Commissioner of Salt, Abkari, etc., Mr. C. G. Todhunter, I.C.S.

Inspector-General of Registration, C. R. M. Schmidt.

President, Madras Corporation, P. L. Moore, C.I.E.

Director of the Kodaikanal and Madras Observatories, J. Evershed.

Supdt., Govt. Central Museum, and Principal Librarian, Connemara Public Library, J. R. Henderson.

Piscicultural Expert, H. C. Wilson.

Persian and Hindustani Translator to Government, Major A. R. Nethersole, I.A.

Registrar of Co-operative Credit Societies, L. D. Swamikannu Pillai, Diwan Bahadur.

Director of Agriculture, G. A. D. Stuart.

Consulting Architect, W. H. Nicholls.

Sheriff, Mr. W. A. Beardsell.

Presidents and Governors of Fort St. George in Madras.

William Gyfford	1684
Elihu Yale	1687
Nathaniel Higginson	1692
Thomas Pitt	1698
Gulston Addison	1709
Died at Madras, 17 Oct., 1709.	
Edmund Montague (*Acting*)	1709
William Fraser (*Acting*)	1709
Edward Harrison	1710
Joseph Collet	1711
Francis Hastings (*Acting*)	1727
Nathaniel Elwick	1727
James Macrae	1725
George Morton Pitt	1730
Richard Benyon	1735
Nicholas Morse	1744
John Hinde	...
Charles Floyer	1747
Thomas Saunders	1750
George Pigot	1755
Robert Palk	1763
Charles Bourchier	1767
Josias DuPre	1770
Alexander Wynch	1773
Lord Pigot (Suspended)	1775
George Stratton	1776
John Whitehill (*Acting*)	1777
Sir Thomas Rumbold, Bart.	1778
John Whitehill (*Acting*)	1780
Charles Smith (*Acting*)	1780
Lord Macartney, K.B.	1781

Governors of Madras.

Lord Macartney, K.B.	1785
Alexander Davidson (*Acting*)	1785
Major-General Sir Archibald Campbell, K.B.	1786
ohn Hollond (*Acting*)	1789
Edward J. Hollond (*Acting*)	1790
Major-General William Medows	1790
Sir Charles Oakeley, Bart.	1792
Lord Hobart	1794
Major-General George Harris (*Acting*)	1798
Lord Clive	1799
Lord William Cavendish Bentinck	1803
William Petrie (*Acting*)	1807
Sir George Hilaro Barlow, Bart., K.B.	1807
Lieut.-General the Hon. John Abercromby.	1813
The Right Hon. Hugh Elliot	1814
Major-General Sir Thomas Munro, Bart., K.C.B.	1820
Died, 6 July, 1827.	
Henry Sullivan Grœme (*Acting*)	1827
Stephen Rumbold Lushington	1827
Lieut.-General Sir Frederick Adam, K.C.B.	1832
George Edward Russell (*Acting*)	1837
Lord Elphinstone, G.C.H., P.C.	1837
Lieut.-General the Marquess of Tweeddale, K.T., C.B.	1842
Henry Dickinson (*Acting*)	1848
Major-General the Right Hon. Sir Henry Pottinger, Bart., G.C.B.	1848
Daniel Eliott (*Acting*)	1854
Lord Harris	1854
Sir Charles Edward Trevelyan, K.C.B.	1859
William Ambrose Morehead (*Acting*)	1860
Sir Henry George Ward, G.C.M.G.	1860
Died at Madras, 2 August, 1860.	
William Ambrose Morehead (*Acting*)	1860
Sir William Thomas Denison, K.C.B.	1861
Acting Viceroy, 1863 to 1864.	
Edward Maltby (*Acting*)	1863
Lord Napier of Merchistoun, K.T. (*a*)	1866
Acting Viceroy.	
Alexander John Arbuthnot, C.S.I. (*Acting*)	1872
Lord Hobart	1872
Died at Madras, 27 April, 1875.	
William Rose Robinson, C.S.I. (*Acting*)	1875
The Duke of Buckingham and Chandos	1875
The Right Hon. W. P. Adam	1880
Died at Ootacamund, 24 May, 1881.	
William Hudleston (*Acting*)	1881
The Right Hon. M. E. Grant Duff	1881
The Right Hon. Robert Bourke, P.C.	1886
Lord Connemara, 12 May, 1887 (by creation).	
John Henry Garstin, C.S.I. (*Acting*)	1890
Baron Wenlock	1891
Sir Arthur Elibank Havelock, G.C.M.G.	1896
Baron Ampthill	1900
Acting Viceroy and Governor-General, 1904.	
James Thomson, C.S.I. (*Acting*)	1904
Gabriel Stokes, C.S.I. (*Acting*)	1906
Hon. Sir Arthur Lawley, K.C.M.G., G.C.I.E.	1906
Sir Thomas David Gibson-Carmichael, Bart., K.C.M.G., G.C.I.E. (*b*)	1911
Became Governor of Bengal, 1 April,	1912
Sir Murray Hammick, K.C.S.I., C.I.E. (*Acting*).	1912
Right Hon. Baron Pentland, P.C., G.C.I.E.	1912
Baron Willingdon	1918

(*a*) Afterwards (by creation) Baron Napier of Ettrick.

(*b*) Afterwards (by creation) Baron Carmichael of Skirling.

The Bengal Presidency.

The Presidency of Bengal, as constituted on the 1st April 1912, comprises the Burdwan and Presidency divisions and the district of Darjeeling, which were formerly administered by the Lieutenant-Governor of Bengal; and the Rajshahi, Dacca and Chittagong divisions which by the partition of the old Province had been placed under the administration of the Lieutenant-Governor of Eastern Bengal and Assam. The area of the Presidency is 84,092 square miles, and it possesses a population of 46,305,642 persons; included within this area are the two Native States of Cooch Behar and Hill Tippera, which are under the general supervision of the Government of Bengal. The area of the British territory is 78,699 square miles. Bengal comprises the lower valleys and deltas of the Ganges and Brahmaputra, and in the main consists of a great alluvial plain intersected in its southern portion by innumerable waterways. In the north are the Himalayan mountain and submontane tracts of Darjeeling and Jalpaiguri, and on the south-east the hills in Hill Tippera and Chittagong, while on the west the Chota Nagpur plateau is continued by an undulating tract running through the western portions of Midnapur, Bankura, Burdwan and Birbhum. The general range of the country however is very low, and a great fertile plain extends southward from Jalpaiguri to the forests and swamps known as the Sunderbans, which lie between the area of cultivation and the Bay of Bengal.

The People.

Of the inhabitants of the Presidency 24,237,238 or 52·4 per cent. are Mahomedans and 20,945,379 Hindus. These two major religions embrace all, but 2·4 per cent. of the population. Christians, Buddhists, and Animists combined number a little over 1,100,000.

Bengali is spoken by ninety-two per cent. of the population of the Presidency and Hindi and Urdu by four per cent. The Oriya-speaking people number nearly 300,000 and Naipali is the tongue of 89,000 persons principally residents in the Darjeeling and Jalpaiguri districts. The great majority of the speakers of the Munda languages are Santals in West and North Bengal.

Industries.

According to the returns of the Census of 1911 nearly 35½ million or three-fourths of the population derive their support from pasture and agriculture, and of these nearly 30 millions are cultivators, and nearly 3¾ millions farm servants and field labourers. The area under jute in 1918 is estimated at 2,219,212 acres against 2,376,247 in 1917. The weather although favourable at sowing time was too wet for the crop in its early stages. Owing to the unfavourable season the crop outturn is on the whole poor one especially in the Presidency and Burdwan Divisions. In Eastern Bengal early harvesting on the lower lying areas, with a consequent cutting of much immature jute, was necessitated by the early rise of the rivers. The season in Northern Bengal was unfavourable owing to excessive rainfall and persistent water-logging. Bengal is the most important rice-producing area in Northern India, and it is computed that about 85 per cent. of the cultivated area of the Presidency is devoted to its production. Other crops include barley, wheat, pulses and oil-seeds, the area devoted to the last named being 1,558,300 acres. Sugar is produced both from the sugarcane and from the date-palm, and tobacco is grown for local consumption in nearly every district of Bengal. The area under tea in 1917-18 was 167,700 acres. There were 305 plantations employing a daily average of 107,670 permanent and 30,731 temporary hands.

Manufacture and Trade.

The main industries in this part of India in addition to the agricultural industry are the jute mill industry, the tea industry (largely an Assam industry) and Coal mining. The Jute Mills in and around Calcutta constitute the principal manufacturing industry of the Presidency. Difficulties with freight and exchange prevented free exports of jute manufactures with the result that the Bengal Mills worked only five days per week instead of six during the first nine months of 1917-18. Since January 1918, however, they have resumed full time working. There were 72 mills belonging to 43 companies (including four private concerns) at work throughout the year with 40,271 looms and 825,790 spindles. The average number of persons employed daily was 262,767. There were no difficulties as regards the supply of labour. Only one mill has come into existence during the year and is working with only 35 looms and 2,920 spindles at present. The total profits (after deduction of interest on debentures but subject to allowances for depreciation) made by 42 Jute Mill Companies in Bengal (owning 67 Mills) at the close of the year 1917 were Rs. 646 lakhs. The corresponding figures for 1914, 1915 and 1916 were Rs. 1,23, Rs. 6,99 and 9,23 lakhs respectively. The value of the exports of Raw Jute during 1917-18 decreased by nearly 9,11 lakhs to Rs. 6,24 lakhs. The quantity exported, however, was less than in the preceding year by 241,968 tons. The Jute cess benefited the Calcutta Improvement Trust to the extent of Rs. 7·4 lakhs, while Rs. 10·11 lakhs were collected in the preceding year. The exports of raw and manufactured Jute represented 68 per cent. of Calcutta's exports during 1917-18 and jute manufactures were, it may be noted, India's premier export in that year. Other principal industries are cotton twist and yarn, silk yarn and cloth, handmade cloth, sugar, molasses and paper. Fourteen cotton mills were at work during 1917-18 employing daily on an average 11,000 persons. The silk weaving industry continues to decline. There was only one silk mill working during 1917 which employed 103 hands. The manufacture of tea is carried on an extensive scale in Darjeeling and Jalpaiguri. The capital employed in the industry in India amounts to about Rs. 33 crores and the daily average labour force to 752,000. In 1917 the number of coal mines

worked in Bengal was 190. The total output for Bengal was 4,632,000 tons against 4,992,000 tons raised in 1916, while the output of all the mines in Bengal, Bihar and Orissa, and Assam amounted to 16,865,000 tons. The capital in the industry employed in these provinces is approximately Rs. 705 lakhs. The daily average of persons employed in the coal mines in Bengal was 38,585 and in Bengal, Bihar and Orissa, and Assam 148,108. Three paper mills produced paper valued at Rs. 1,63 lakhs in 1917, the highest on record.

In 1917-18 the foreign seaborne trade of Bengal (excluding treasure but including Government stores) amounted to Rs. 150½ crores of which Rs. 62,38 crores represented imports and Rs. 88·13 crores exports. Of the total foreign and coasting trade of Bengal, 96 per cent. was the share of Calcutta. The six chief exports from Bengal are in order of importance: jute (raw and manufactures), tea, hides and skins (raw), lac, grain, pulse and flour and opium seeds and the six leading imports are cotton goods, sugar, metals, machinery and mill-work, salt, and oils.

Administration.

The present form of Government dates from the 1st of April 1912, when the administrative changes announced by the King-Emperor at Delhi in December 1911 came into operation. A Governor was then substituted for a Lieutenant-Governor, who had previously been at the head of the Province, and Lord Carmichael of Skirling assumed charge of the office. He was succeeded by the Earl of Ronaldshay in March 1917. The Governor is assisted by an Executive Council, two of whom are at present members of the Indian Civil Service and the third an Indian. The Civil Secretariat consist of the Chief Secretary, who is in charge of the Political and Appointment Department, the Judicial Secretary, the Revenue Secretary, the Financial Secretary, who also deals with Commercial questions, the General Secretary who deals with questions of Local Self-Government and Education and the Legislative Secretary, four Under-Secretaries and one Assistant Secretary. The Government divides its time between Calcutta, Darjeeling and Dacca.

Bengal is administered by five Commissioners under the Governor in Council, the divisions being those of the Presidency, Burdwan, Rajshahi, Dacca and Chittagong. The unit of administration is the District Magistrate and Collector. As Collector he supervises the ingathering of the revenue and is the head of all the Departments connected with it, while as District Magistrate he is responsible for the administration of Criminal justice in the district. The immediate superior of the District Magistrate is the Divisional Commissioner. Commissioners are the channels of communication between the local officers and the Government. In certain revenue matters they are, in their turn, subject to the Board of Revenue in Calcutta; in other matters they are under the direct control of Government.

Justice.

The administration of justice is entrusted to the High Court of Calcutta which consists of the Chief Justice who is a barrister and 13 puisne judges who are barristers, civilians or vakils. Below the High Court are the District and Additional Judges, the Small Cause Court and Subordinate Judges and the Munsifs. Of these officers the District and Additional Judges and a certain number of subordinate judges are also endowed with the power of a Criminal Court while the remainder have jurisdiction in Civil matters only. Criminal justice is administered by the High Court, the Courts of Session and the courts of the various classes of magistrates. On its appellate side the High Court disposes of appeals from the order of a Court of Session, and it also confirms, modifies or annuls sentences of death passed by Sessions Courts. Calcutta has four Presidency Magistrates, two Municipal Magistrates and also a number of Honorary Magistrates and it possesses a Court of Small Causes with six judges who dispose of cases of the class that are usually heard in County Courts in England.

Local Self-Government.

By Bengal Act III of 1884 which regulates municipal bodies in the interior and its subsequent amendments the powers of Commissioners of municipalities have been increased, and the elective franchise has been extended. Municipal expenditure now comprises a large number of objects, including veterinary institutions and the training and employment of Health Officers and Sanitary Inspectors and female medical practitioners. The Commissioners also have large powers in regard to the water-supply and the regulation of buildings. In Calcutta Act (III) of 1899 created three co-ordinate municipal authorities, the Corporation, the General Committee, and the Chairman. The total number of Commissioners is fifty, of whom 25 are elected, and the remainder appointed by Government and by commercial bodies. In order to improve the insanitary and congested areas of the city, the Calcutta Improvement Trust has been created with extensive powers. In the mofussil, District and Local Boards exercise considerable powers, with regard to Public Works, Education and Medical relief and Union Committees have been formed which deal for the most part with the control of village roads, sanitation and water-supply.

Finance.

As in other Provinces, the revenue is divided between the Local Government and the Government of India. The Budget for 1918-19 showed an opening balance of Rs 3·78 crores, estimated revenue amounted to Rs. 6·96 crores and expenditure aggregated Rs. 7·37 crores. Of the closing balance of Rs. 3,37 lakhs, Rs. 2,56 lakhs was earmarked for various objects.

Public Works.

The Public Works Department is at present under the charge of a Chief Engineer and the Irrigation Department under that of a temporary Chief Engineer whose appointment has been sanctioned for eight years. The redistribution of territories on 1st April 1912 caused considerable changes in this Department and almost all the Irrigation works in the old province of Bengal as well as two out of the three Canal Revenue Divisions went to the new province of Bihar and Orissa. There was also a considerable reduction in the staff and in the number of P. W. Circles and Divisions. Public buildings are erected

by the Department which constructs roads and carries out miscellaneous public improvements. Irrigation Works in Bengal are under the charge of the Irrigation Department which deals with the numerous embankments and drainage works as well as waterways that intersect the province.

The Marine Department which deals with all questions connected with the Bengal Pilot Service, Merchant Shipping and with the importation, possession, &c., of petroleum is also under the charge of the Irrigation Secretary.

Police.

The Bengal Police force comprises the Military Police, the District Police, the Railway Police, and the River Police. The District Police are under the control of the Inspector-General of Police, the present Inspector-General being a member of the Imperial Police Service. Under him are Deputy Inspectors-General, for the Dacca Range, the Rajshahi range, the Presidency range, the Burdwan range and the new Bakarganj range and also two Deputy Inspectors-General, one in charge of the C. I. D., and the other in charge of the Intelligence Branch of the C. I. D. Each district is in charge of a Superintendent, and several of the more important districts have an Additional Superintendent. The Railway Police is divided into three distinct charges each under a Superintendent. The River Police is also under a Superintendent. The cadre comprises Assistant Superintendents, Deputy Superintendents, Inspectors, Sub-Inspectors, Sergeants, head constables and constables. There is also a Village Police, composed of daffadars and chowkidars, who receive a monthly salary which is collected from the villages by the Panchayat. In the Madaripur Sub-Division however the daffadars who are whole-time servants are paid partly by Government and partly by the Panchayat. The Calcutta City police is a separate force maintained by Government under a Commissioner who is responsible direct to Government. The Commissioner has under him Deputy Commissioners, Assistant Commissioners, Inspectors, Sub-Inspectors, European Sergeants, head constables and constables. A school for the training of recruits for the Calcutta Police force has been established at Calcutta. There is a training college and school at Sardah, in the district of Rajshahi where newly appointed gazetted officers, Sub-Inspectors and constables learn their duties. There are two other schools at Dacca and Berhampore for the training of constables. The annual cost of the Police is over Rs. 110 lakhs.

Medical.

The head of the Medical Department is the Surgeon General with the Government of Bengal, and Sanitation is in charge of the Sanitary Commissioner, the former appointment is always held by a member of the Indian Medical Service, while the latter post is also ordinarily held by a member of that service. There is also a Sanitary Engineer for the Presidency. In the districts the Civil Surgeons are responsible for medical work. There are 22 hospitals in Calcutta, 10 of which are supported by the Government and 446,675 persons are treated at these institutions during 1917, of whom 34,104 were in-patients. In the mofussil districts there are 724 hospitals and dispensaries; the number of patients treated in them during 1917 was 6,340,564 including 65,617 in-patients.

Education.

In the Presidency of Bengal education is imparted partly through Government agency and partly through private bodies, assisted in large measure by Government grants-in-aid. Government maintains three Arts Colleges in Calcutta (of which one is a college for women and one the Sanskrit College), one at Hughli, one at Krishnagar, one at Dacca, one at Rajshahi and one at Chittagong. It also maintains two training colleges, one at Calcutta and one at Dacca, for teachers who teach in secondary schools through the medium of English and 5 normal schools, one in each division, for the training of teachers in secondary schools through the medium of the vernacular; also an engineering college at Sibpur and an engineering school at Dacca, a medical college, a veterinary college, a school of art and a commercial school in Calcutta and a weaving school at Serampore. It also provides at the headquarters of all districts, except Burdwan and Midnapore, and also at certain other mofussil centres, High English schools for the education of boys, while to some Government Arts Colleges high schools are attached. In Calcutta there are four high schools for boys, two of which are attached to Presidency College and one to the Sanskrit College. There is another school at Hastings House, Alipur, which is a residential institution. Government high schools for girls exist only in the headquarters stations of Calcutta, Dacca, Mymensingh and Chittagong. The other secondary schools, with the exception of a few middle schools managed either by Government or by boards, are under private control. The administration of primary education in all areas, which are not under municipalities, rests with the district boards, large grants being given from provincial revenues to the boards, which contribute only slightly from their own funds. Only in backward localities are such schools either entirely managed, or directly aided, by Government. Apart from the institutions referred to above, 115 institutions called Guru Training Schools are maintained by the Department for the training of vernacular teachers. For the education of Mahomedans, there are senior madrasas at Calcutta, Dacca, Chittagong and Hughli, which are managed by Government. There are also certain Government institutions for technical and industrial education. A large proportion of educational work of every stage is under the control of various missionary bodies, which are assisted by Government grants-in-aid.

The municipalities are required to expend a certain proportion of their ordinary income on education. They are mainly responsible for primary education within their jurisdiction, but schools in these areas are eligible also for grants from Government. These bodies maintain a second grade Arts College and a high school at Midnapore, a high school at Burdwan, a high school at Baranagore and a high school at Chittagong.

There were on 31st Mar.'17 in the Presidency:—

Arts Colleges	33	Secondary Schools	2,756
Law „	9	Primary Schools	41,961
Medical Colleges	2	Special „	1,331
Engineering College	1	Private Institutions	2,269
Training Colleges	5		

with 19,18,434 pupils in all.

The Department is administered by a Director of Public Instruction, assisted by an Assistant Director and an Assistant Director for Muhammadan Education and a special officer in connection with Technical and Industrial Education. Each division is in charge of a Divisional Inspector assisted by a certain number of Additional and Assistant Inspectors according to the requirements of the several divisions. Similarly the administrative charge of the primary education of each district is in the hands of a Deputy Inspector assisted by Additional Deputy and Sub-Inspectors of Schools, the latter class officers being in some instances helped by officers of humbler status called Assistant Sub-Inspectors and Inspecting Pandits and Maulvis. Higher education is controlled by the University (Calcutta) established in 1857, administered by the Chancellor (the Governor-General and Viceroy of India), the Rector (the Governor of Bengal), the Vice-Chancellor (appointed by the Government of India, usually for two years at a time), and 110 Fellows, of whom 10 are ex-officio, 10 are elected by registered Graduates, 10 by the Faculties and the remainder 80 are nominated by the Chancellor. The University maintains a Law College, called the University Law College, Calcutta. The University is mainly an examining body, but it has now made itself responsible for the actual teaching of students, for which purpose it employs an agency which is quite distinct from the staffs of the affiliated colleges.

The following University Professorships have been founded:—(1) Prasanna Kumar Tagore Law Professorship, (2) Minto Professorship of Economics, (3) George V. Professorship of Mental and Moral Science, (4) Hardinge Professorship of Higher Mathematics, (5) Carmichael Professorship of Ancient Indian History and Culture, (6) Palit Professorships of Chemistry and Physics, (7) Sir Rash Behary Ghose Professorship of Applied Mathematics, Physics, Chemistry and Botany, and (8) Two Professorships of English.

The principal educational institutions are:—

GOVERNMENT ARTS COLLEGES.

Presidency College, Calcutta, Principal, W. C. Wordsworth; officiating Director, Mr. J. R. Barrow, officiating.

Dacca College, Principal, F. C. Turner.

Rajshahi College, Principal, Rai K. K. Banerji Bahadur.

Chittagong College, Principal, J. R. Barrow, on deputation. Babu Purnachandra Kundu, officiating.

Sanskrit College, Principal, Dr. S. C. Acharya.

Hughli College, Principal, J. M. Bottomley.

Krishnagar College, Principal, R. N. Gilchrist.

Bethune College, Calcutta, Principal, Miss M. Wright.

PRIVATE ARTS COLLEGES.

Aided.

Scottish Churches College, Calcutta, Principal, Rev. J. Watt.

St. Xavier's College, Calcutta, Rector, Rev. Father Crohan.

Jagannath College, Dacca, Principal, Rai L. M. Chatterji Bahadur.

Brajamohan College, Barisal, Principal, N. L. Mookherjee.

Anandamohan College, Mymensingh, Principal, Dr. J. Ghosh.

Victoria College, Comilla, Principal, Satyendranath Basu.

Wesleyan College, Bankura, Principal, Rev. J. Mitchell.

Victoria College, Narail, Principal, Gopalchandra Maitra.

Hindu Academy, Daulatpur, Principal, Kamakhyacharan Nag.

Serampore College, Principal, The Rev. Dr. George Howell.

St. Paul's Cathedral Mission College, Calcutta, Principal, The Rev. W. E. S. Holland.

Edward College, Pabna, Principal, R. Bose.

Diocesan College, Calcutta, Lady Principal, Sister Mary Victoria, C.T.S.B.

Unaided.

City College, Calcutta, Principal, Heramba Chandra Maitra.

Ripon College, Calcutta, Principal, Ramendra Sundar Trevedi.

Bangabasi College, Calcutta, Principal, G. C. Bose.

Vidyasagar College, Calcutta, Principal, Saradaranjan Roy.

Central College, Calcutta, Principal, Khudiram Bose.

Krishna Chandra College, Hetampur, Principal, Dhurumdas Dutt.

Burdwan Raj College, Principal, Umacharan Bandopadhayaya.

Uttarpara College, Principal, Jogendra Nath Mitra.

Krishnath College, Berhampore, Principal, S. Banerji (offg.)

Loreto House, Calcutta, Lady Principal, The Rev. Mother Mary Borgia, I.B.V.M.

Carmichael College, Rangpur, Principal, Rev. Dr. C. H. Watkins.

Rajendra College, Faridpur.

Bagerhat College, Khulna.

South Subarban College, Bhabanipur.

MUNICIPAL.

Midnapore College, Principal, Jogendra Nath Hazra.

COLLEGES FOR PROFESSIONAL TRAINING.

Engineering—Government.

Civil Engineering College, Sibpur, Principal, B. Heaton.

Teaching—Government.

David Hare Training College, Principal, W. E. Griffith (on deputation). Babu Chinta Haran Chakravarti (offg.)

Dacca Training College, Principal, E. E. Biss (on deputation). Mr. H. A. Stark (offg.)

Unaided.

L. M. S. Training College, Bhowanipore (Calcutta), Rev. A. Sims.

Training Department attached to Loreto House, Calcutta.

Aided.

Diocesan College, Calcutta, Lady Principal, Sister Mary Victoria, C.I.I.B.

Medicine—Government.

Medical College, Calcutta, Principal, Lt.-Col. J. T. Calvert.

Law.

University Law College, Calcutta, Principal, Dr. Satis Chandra Bagchi.

The Law Department, attached to the Dacca College, Vice-Principal, Naresh Chandra Sen Gupta.

The Law Department, attached to the Ripon College, Calcutta, Principal, Jankinath Bhattacharji.

There are also Pleadership classes attached to the Government Colleges at Dacca, Rajshahi, Hoogly Chittagong and Krishnagar and in the unaided college at Berhampore, the Ripon College and the Metropolitan Institution, Calcutta, and the Municipal College at Midnapore.

Administration.

GOVERNOR AND PRESIDENT IN COUNCIL.

His Excellency The Rt. Hon. Lawrence John Lumley Dundas, Earl of Ronaldshay, G.C.I.E. Took his seat, 26th March 1917.

PERSONAL STAFF.

Private Secretary, W. R. Gourlay, on Special duty; *officiating* H. R. Wilkinson.

Military Secretary, Capt. Henry George Vaux.

Surgeon, Major J. D. Sandes, I.M.S.

Aides-de-Camp, Capt. R. W. Hyde, Lt. D. Balfour.

Honorary Aides-de-Camp, Col. C. M. Pearce, V.D.; Commander E. A. Constable, R.N.; Lt.-Col. R. Glen, V.D.; Lt.-Col. G. F. Stoddart; Lt.-Col. R. S. Hawkins, V.D.; Commander Duncan Frederick Vines, R. I. M.; Lt.-Col. D. A. Tyrie, V.D., Col. C. H. Shepherd.

Extra Aide-de-Camp, 2nd Lt. C. B. Lyon.

Indian Aide-de-Camp, Risaldar Faiz Muhammad Khan.

Commander of Body Guard, Capt. P. V. Douvetil, I.A.R.O.

MEMBERS OF COUNCIL.

Sir Henry Wheeler, K.C.I.E., C.S.I., I.C.S. Took his seat on 9th April 1917.

Mr. John Ghest Cumming, C.S.I., C.I.E., I.C.S., 29th March 1918.

Sir Satyendra Prasanna Sinha, Kt., 8th June 1917

Sir Bijay Chand Mahtab, K.C.S.I., K.C.I.E., I.O.M., 14th May 1918.

Maharajadhiraja Bahadur of Burdwan (Temporary.)

Nominated, Officials.

Mr. James Donald.
,, J. H. Kerr, C.I.E.
Mr. C. H. Bompas.
C. J. Stevenson Moore.
T. C. P. Gibbons.
L. S. S. O'Malley, I.C.S.
Rai Priya Nath Mukharji Bahadur.
Mr. E. B. H. Panton.
,, C. F. Payne, I.C.S.
Surg.-General W. H. B. Robinson.
Mr. W. C. Wordsworth.
,, F. A. A. Cowley.

Nominated Non-officials.

Nawab Sir Asif Qudr Saiyid Wasif Ali Mirza Khan Bahadur, K.C.V.O. of Murshidabad.
Sir Rajendra Nath Mukharji, K.C.I.E.
Mr. James Mackenzie.
Dr. Sir Nilratan Sarkar.
Raja Hrishikesh Laha, C.I.E.
Mr. J. W. H. Hutchinson.
,, W. H. Heton Arden Wood, C.I.E.
,, Aminur Rahman.

Elected.

Mr. Provash Chandra Mitter.
Babu Sib Narayan Mukharji.
Kumar Shib Shekhareswar Ray.
Babu Brajendra Kishor Ray Chaudhuri.
Babu Arun Chandra Singh.
Dr. Sir Deba Prosad Sarbadhikari.
Rai Radhacharan Pal Bahadur.
Mr. F. W. Carter, C.I.E.
,, Walker Erskine Crum, O.B.E.
,, Rai Debendra Chandra Ghosh Bahadur.
,, Ernest Bruce Eden.
,, H. R. A. Irwin.
Dr. Abdulla-al-Mamum, Suhrawardy.
Maulvi Abdul Kasem.
Maulvi Abdul Kasem Fazl-ul-Haq.
Mr. Ashrafali Khan Chaudhuri.
Khan Sahib Aman Ali.
Babu Bhabendra Chandra Ray.
Rai Mahendra Chandra Mitra.
Mr. Altaf Ali.
Rai Sri Nath Ray.
Babu Akhil Chandra Datta.
Babu Surendra Nath Ray.
Babu Mohendra Nath Ray.
Babu Kshirod Bihari Dutta.
Babu Kishori Mohan Chaudhuri.
Mr. Ambika Charan Mazumdar.

SECRETARIAT.

Chief Secretary to Government, J. H. Kerr, C.I.E.

Secretary, Revenue Department, L. Birley, C.I.E.

Secretary, General Department, L. S. S. O'Malley.

Secretary, Financial Department, J. Donald, C.I.E.

Acting Secretary to the Council and Secretary, Legislative Department, A. M. Hutchison.

Secretary to Government, Public Works Department, and Chief Engineer, C. P. Walsh.

Under Secretary to Government, Public Works Department (Civil Buildings Branch), G. A. Easson.

BOARD OF REVENUE.

Member, Charles James Stevenson-Moore.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, W. W. Hornell.

Principal School of Arts, P. Brown.

Inspector-General of Police, C. W. C. Plowden, C.I.E.

Commissioner, Calcutta Police, Reginald Clarke (Offg.)

Conservator of Forests, Sir Henry Anthony Farrington, Bart.

Surgeon-General, W. H. B. Robinson, I.M.S

Sanitary Commissioner, Lieut.-Colonel W. W. Clemesha (on Military duty).

Collector of Customs, Calcutta, C. W. E. Cotton, B.A., I.C.S.

Commissioner of Excise and Salt, Satis Chandra Mukerji, I.C.S.

Accountant-General, H. G. Tomkins, C.I.E.

Inspector-General of Prisons, Lt.-Col. Sir W. J. Buchanan, C.I.E.

Postmaster-General, George Waverling Schoneman.

Inspector-General of Registration, P. N. Mukharji.

Director of Agriculture, S. Milligan.

Protector of Emigrants, C. Banks, M.D.

Chairman of Calcutta Corporation, C. F. Payne.

Sheriff, Prince Akram Hussain.

Superintendent, Royal Botanic Gardens, Major A. T. Gage.

Coroner, F. K. Dobbin.

Registrar of Co-operative Credit Societies, J. M. Mitra.

LIEUTENANT-GOVERNORS OF BENGAL.

Frederick J. Halliday	1854
John P. Grant	1859
Cecil Beadon	1862
William Grey	1867
George Campbell	1871
Sir Richard Temple, Bart., K.C.S.I. ..	1874
The Hon. Ashley Eden, C.S.I.	1877
Sir Steuart C. Bayley, K.C.S.I. (*Offg.*) ..	1879
A. Rivers Thompson, C.S.I., C.I.E... ..	1882
H. A. Cockerell, C.S.I. (*officiating*) ..	1885
Sir Steuart C. Bayley, K.C.S.I., C.I.E. ..	1887
Sir Charles Alfred Elliott, K.C.S.I. ..	1890
Sir A. P. MacDonnell, K.C.S.I. (*Offg.*) ..	1893
Sir Alexander Mackenzie, K.C.S.I. ..	1895
Retired 6th April 1898.	
Charles Cecil Stevens, C.S.I. (*Officiating*) .	1897
Sir John Woodburn, K.C.S.I. .. .. Died, 21st Nov. 1902.	1898
J. A. Bourdillon, C.S.I. (*Officiating*) ..	1902
Sir A. H. Leith Fraser, K.C.S.I.	1903
Lancelot Hare, C.S.I., C.I.E. (*Offg.*) ..	1906
F. A. Slacke (*Officiating*)	1906
Sir E. N. Baker, K.C.S.I. .. .. .. Retired 21st Sept. 1911.	1908
F. W. Duke, C.S.I. (*Officiating*)	1911

The office of Lieutenant-Governor of Bengal was abolished on April 1st, 1912, when Bengal was raised to a Governorship.

GOVERNORS OF THE PRESIDENCY OF FORT WILLIAM IN BENGAL.

The Rt. Hon. Baron Carmichael of Skirling, G.C.I.E., K.C.M.G.	1912
The Rt. Hon. Earl of Ronaldshay, G.C.I.E.	1917

The United Provinces.

The United Provinces of Agra and Oudh lie in practically the centre of Upper India. They are bounded on the north by Tibet, on the north-east by Nepal, on the south and south-east by Bengal, on the south by two of the Chota Nagpur States of the Central India Agency and the Saugor District of the Central Provinces, and on the west by the States of Gwalior, Dholpur, Bharatpur, Sirmor, and Jubbal, and by the Punjab. Their total area amounts to 107,267 square miles, to which may be added the area of the two Native States of Tehri and Rampur, both of which lie within the United Provinces, 5,079 square miles and the newly-created independent State of Benares with an area of 865 miles, giving a total of 112,346 square miles. The total population is 48,014,080, out of which Tehri and Rampur account for 832,036.

The Provinces, originally termed the North-Western Provinces and so amalgamated in 1877, receiving their present designation in 1902, include four distinct tracts of country : portions of the Himalayas, the sub-Himalayan tracts (the Kumaon), the great Gangetic plain and portions of the hill systems of Central India (Bundelkhand). The first two of these tracts are infertile and support a very sparse population and the Central Indian plateau is almost equally infertile, though better populated. The soil of the Gangetic plain, however, possesses an extreme fertility and here the density of population rises from 512 persons per square mile in the west, to 549 in the centre and 718 in the east, which gives the Provinces as a whole a greater population pressure on the soil than any other Provinces in India. In the south there are low rocky hills, broken spurs of the Vindhyan mountains, covered with stunted trees and jungle, and in the North the lower slopes of the Himalayas, clothed with dense forest, affording excellent big and small game shooting, and rising beyond in a tangled mass of ridges, ever higher and higher, until is reached the line of the eternal snows, but the greater part of the provinces consists of level plain, teeming with highly-cultivated fields and watered by four rivers—the Ganges, Jumna, Gogra and the Gumti.

The People.

The population is mainly Hindu, 85 per cent. ranking as such whilst Mahomedans number 14 per cent., the total of all other religions being less than 0·6 per cent. composed of Christians (Europeans and Indians),Jains, Aryas and Sikhs; the Aryas are the followers of the Arya Samaj sect, which obtains widely in the Punjab and has extended its influence to the United Provinces. The three main physical types are Dravidian, Aryan and Mongoloid, the latter being confined to the Himalayan and sub-Himalayan districts and the former to South Mirzapur and Bundelkhand, whilst the high-caste Aryans frequent the western Districts of the Province. Most of the people, however, show a mixed Arya-Dravidian origin. Three languages are spoken by the great majority of the people in the plains—Western Hindi, Eastern Hindi and Behari; Urdu, or Hindustani is a dialect of Western Hindi, though it contains a large admixture of Persian and Arabic words, which makes it a *lingua franca*.

Industries.

The principal industry is agriculture, which supports no less than 71·7 of the population. The soils of the Provinces fall into three groups; the valley soils of the Himalayas, the main alluvium and the Central Indian alluvium; the chief characteristic soil of the Central Indian alluvium is the black soil, with a lighter variant, though here also there are light loams and gravel. The Himalayan soils are of local origin and vary with the nature of the rock from which they have been formed, whilst the main alluvium soils are sand, clay and loam, the loam being, naturally, the most productive. The soil generally yields excellent crops of rice,millet, maize, linseed, cotton, wheat, sugarcane, pulses, barley and poppy, rice being grown mostly in low-lying, heavy clays. The greater part of the Provinces is highly cultivated, the rainfall varies from 50 to 60 inches in the Hills, to 40 inches in the Benares and Gorakhpur Divisions, whilst the Agra Division receives about 25 to 30 inches annually only. Drought seriously affected Bundelkhand and the Agra Division, in the past, but improved drainage, and irrigation (a protective system of irrigation works exists and is being extended) have enabled a complete recovery to be made and the agricultural prosperity of the Provinces is now high, though it varies with the rainfall. The great scourge has been, and is, that of plague, which hampers the agriculturist severely, and in the Terai, malaria still exacts a large toll. Land is held mostly on the ryotwari tenure in Bundelkhand and Kumaon, on zemindari tenure in Agra and taluqdari tenure in Oudh. The principal land owners in Oudh are the Taluqdars, some of whom own very large estates. The area held in taluqdari tenure amounts to 51 per cent. of the total area in Oudh.

Manufactures.

The Provinces are not rich in minerals. Coal exists in Southern Mirzapur, iron and copper are found in the Himalayan Districts, and there were mines of importance there formerly, but increased difficulty of working them as veins became exhausted resulted in the closure of most of them. Gold is found in minute quantities by washing in some of the rivers in the Hills. Limestone is found in the Himalayas and stone is largely quarried in the Mirzapur District. Cotton is ginned and spun throughout the provinces, as a home industry, and weaving, by means of hand-looms, is carried on in most districts. In 1901 nearly a million persons were dependent on weaving, 140,000 on spinning and 136,000 on cleaning, pressing, and ginning, but during the last decade these industries have been on the decrease. The largest industry is in Azamgarh district, where there are 130,000 looms. Silk spinning is confined almost entirely to the district of Benares, where the famous *Kinkob* brocade is made. Em-

broidery is manufactured in Lucknow, where the noted *chikan* work of silk on cotton or muslin, is produced, and in Benares, where gold and silver work on velvet silk, crepe and sarsenet obtains. The glass industry is important in some districts, Benares and Moradabad are noted for their lacquered brass work, porcelain is manufactured at Ghazipur, and other industries are those of paper-making (Lucknow) dyeing, leather-work and fireworks. The chief centre of European and Indian industry is Cawnpore, which, situated in most advantageous position on the Ganges, possesses tanneries, cotton, woollen, jute and other mills, which have a large and ever increasing output (the woollen mill is the largest in India). There are cotton factories at Aligarh (famous for its locks), Meerut and Bareilly; Mirzapur (which produces also excellent carpets), Hardoi and Hathras have cotton mills. Excellent furniture is made at Bareilly, at Allahabad there are stone works, at Rosa there is a very large English distillery, with patent still, and the provinces can claim six breweries, with an out-turn of over a million gallons.

The largest trade centres are Cawnpore, Allahabad, Mirzapur, Benares, Lucknow, Meerut, Aligarh, Hathras, Muttra, Agra, Farukhabad, Moradabad, Chandausi, Bareilly, Saharanpur, Muzufarnagar, Ghaziabad, Khurja, Gorakhpur, Ghazipur, Pilibhit and Shahjahanpur.

Administration.

The Provinces are administered by a Lieutenant-Governor, who is generally chosen from among the members of the Indian Civil Service who have served in the Province. The medium for the transaction of public business is the Secretariat, the Staff of which consists of five Secretaries and five Under-Secretaries. The Chief Secretary is in charge of the Revenue, Appointment, General Administration, Political and Forest Departments; another Secretary attends to the Medical, Judicial, Police, Educational and Sanitation Departments; whilst a third looks to the local Self-Government, Financial, Municipal, Miscellaneous and Separate Revenue Departments. The other two Secretaries belong to the Public Works Department, and are also Chief Engineers, one of whom deals with Irrigation, and the other with Roads and Buildings. Government spends the cold weather, October to April, in Lucknow and Allahabad, mostly in Lucknow, the Secretariat moves between these two places. The Lieutenant-Governor and the Secretariat spend the hot weather in Naini Tal, but during the monsoon the Lieutenant-Governor tours the plains, as he does also in the cold weather. The Board of Revenue is the highest court of appeal in revenue and rent cases, and it has important executive duties, being the chief revenue authority in the Provinces. There are forty-eight British districts, thirty-six in Agra and twelve in Oudh, average area 2,000 square miles and average population a million. Each District is in charge of a District Officer, termed a Collector and Magistrate in Agra and a Deputy Commissioner and Magistrate in Oudh and Kumaon, who is an Indian Civilian. The Districts are grouped together in Divisions under a Commissioner. There are nine Divisions, having an average area of nearly 12,000 square miles and a population of from 5 to 6 millions.

The Districts are sub-divided into *tahsils*, of which there are 217, with an average area of 500 square miles and a population of 220,000. Each *Tahsil* is in charge of a *Tahsildar*, who is responsible for the collection of revenue, and also exercises judicial powers. *Tahsils* are divided into *parganas* which are units of importance in the settlement of land revenue. Subordinate to the *Tahsildars* are *kanungos*, of whom there are, on an average, three to a *tahsil*. These officials supervise the work of the *patwaris*, or village accountants, check their papers and form a link direct between the villagers and Government. For judicial purposes (revenue and criminal), the District Officer assigns a subdivision, consisting of one or more *tahsils*, as the case may be to each of his subordinates, who may be covenanted civilians, (Joint and Assistant Magistrates and Collectors) or members of the Provincial Service (Deputy Collectors and Magistrates). The Commissioner of the Bareilly and Kumaon Divisions are Political Agents for the Native States of Rampur and Tehri respectively and the Commissioner of Benares is the Political Agent for Benares State.

Justice.

Justice is administered by the High Court in the Province of Agra, and the Court of the Judicial Commissioner, in Oudh, which are the final appellate authorities in both criminal and civil cases. The former, which consists of a Chief Justice and five puisne Judges, two of whom are Indians, sits at Allahabad, and the latter, represented by a Judicial Commissioner and two Additional Commissioners, one of whom is an Indian, sits always in Lucknow. There are twenty-seven District and Additional District Judges, (Indian Civilians) twenty-one in Agra and six in Oudh, who have both original and appellate jurisdiction in civil and criminal cases, and occasional appellate jurisdiction in rent cases, but District Officers and their assistants, including *Tahsildars*, preside in both criminal and rent and revenue courts, and dispose of a good deal of the work. In Kumaon, the Commissioner is a High Court Judge in Civil cases, and a District Judge in Criminal cases. In the larger Cantonments, the Cantonment Magistrates have limited powers as Judges of a Small Cause Court. There are also Subordinate Judges. Judges of Small Cause Courts and Munsifs, who dispose of a large number of small civil suits, being specially empowered, in some cases, to decide suits up to Rs. 2,000, but generally they take cases up to Rs. 1,000, whilst Subordinate Judges hear cases up to Rs. 5,000. Appeals from Munsifs and Subordinate Judges go to the District Judges. Small Cause Court Judges try suits to the value of Rs 500. There are also Honorary Munsifs, limited to Rs. 200 suits, and village Munsifs, whose jurisdiction is fixed at Rs 20.

Local Government.

Local Government is exercised by means of District and Municipal Boards, the former levying local rates on land-owners; the latter deriving its revenue from octroi and other forms of taxation. The aim is to abolish octroi, because it interferes with through trade. Eighty-five Municipalities possess the privilege of electing their own members and all the principal Boards now have

non-official Chairman, with an Executive Officer who is directly responsible to the Board in all matters. Local self-government has been given a wider extension by the Municipalities Act, passed in 1916, under which the responsibilities of the boards and their chairmen have been largely increased. They deal with questions of sanitation, communication, lighting, town improvement, roads, water supply, drainage and education. Grants are made to Boards by Governments in some cases for special purposes from general revenues. Small towns, termed Act XX towns, also enjoy some measure of local self-government and it is under consideration to extend the principle here, too.

Finance.

The Financial history of the Province has not been a happy one, inadequate settlements, *i.e.*, contracts between the Government of India and the local Government, and the severe famine in 1896 having caused Provincial bankruptcy, which for a long time necessitated rigid economy in order to accumulate reserves which could be spent on productive works. Recently liberal Imperial assignments have been made by the Government of India and the financial prospects are accordingly much brighter, though the war is naturally hampering progress. The local government gets 3-8 only of the land revenue. The Provincial Budget for 1918-19 shows an opening balance of 244 lakhs, revenue 727 lakhs, and expenditure 719 lakhs, and a closing balance of 253 lakhs.

Public Works.

The Public Works Department is divided into the Roads and Buildings branch and the Irrigation branch, each of which is administered by a Chief Engineer, who is also a Secretary to Government. The Provinces are divided into three circles and ten divisions for the administration of roads and buildings, and into four circles and twenty divisions for irrigation purposes. Each circle is in charge of a Superintending Engineer, and each division is in charge of an Executive Engineer. The whole of the irrigation works constructed or maintained by Government are in charge of the Department, nearly all metalled roads, and also bridges on second-class roads, and generally, all works costing more than Rs. 1,000, except in Municipalities. The most important irrigation works within the last twenty years have been the construction of the Betwa Canal, the Fatehpur branch of the Lower Ganges Canal, the Mat branch of the main Ganges Canal, improvements in the Rohilkhand and Terai Canals and extensive drainage operations in the Doab districts of the Meerut and Agra division. Important irrigation extension works are now being considered The budget for irrigation and other public works for the present year is 128 lakhs.

Police.

The Police Force is divided into District and Railway Police and is administered by an Inspector-General, with five Deputies, one of whom is in charge of Railways, and two Assistants, forty-nine District Superintendents, two Railway Superintendents, and thirty Assistant Superintendents. There is a Police Training School at Moradabad. There is a local C. I. D. forming a separate detective department, under a Deputy Inspector-General, with an assistant. There is an armed police, specially recruited, and armed with the Martini Rifle. The present cost of the force is 131 lakhs. The administration of the Jail department is in charge of an Inspector-General of Prisons, who is a member of the Indian Medical Service.

Education.

Education is in part wholly State-maintained; and partly by means of grants-in-aid. There is a State University at Allahabad, a Government Sanskrit College at Benares, whilst Arabic and Persian are taught in special classes at the Muir College, Allahabad, which also has a special science side, which of late has been greatly extended, and there is a Government Engineering College at Roorkee (Thomason College). There are aided Colleges in Lucknow (Canning College), (Reid Christian College), and (Isabella Thoburn College), Agra (St. John's, Aligarh (the Mahomedan Oriental College), Gorakpur, Cawnpore and Meerut, and an unaided College at Benares, the Central Hindu College. In Lucknow there is the Martiniere school, an entirely independent institution, for European and Anglo-Indian children, and there is a Girls' Martiniere connected with it, whilst in the Hill-Stations, Naini-Tal and Mussoorie, there are many excellent private scholastic institutions for European boys and girls, which are attended by students from all over India. Government maintain Training Colleges, for teachers in Lucknow and Allahabad, an Art Crafts and an Industrial School in Lucknow, and an Agricultural College at Cawnpore. Public Schools are almost entirely maintained by the District and Municipal Boards and primary education is almost entirely in their hands. Primary and female education are in a very backward condition, though there was in 1915-16 an increase in pupils under both heads. Technical education is being pushed forward. The total number of schools of all kinds decreased by 170 to 17,631, but that of scholars rose from 832,454 to 841,334. The number of secondary public schools (high schools and middle schools, English and vernacular) for Indian boys rose from 594 to 611, while the number of scholars fell from 102,042 to 97,048. The decrease was wholly in vernacular schools. Students receiving collegiate education rose from 7,121 to 7,487: of these 5,443 were learning English, 3,369 a classical language and 280 a vernacular. The amount budgeted for education this year is 74 lakhs.

Higher education is controlled by the Allahabad University (constd. in 1887) which consists of a Chancellor, Vice-Chancellor and seventy-five ordinary and four *ex-officio* Fellows, of whom some are elected by the Senate or by registered graduates and the Faculties, and the remainder nominated by the Lieutenant-Governor, in his capacity of Chancellor. The Faculties are those of Art, Science, Law and Medicine, and the University possesses an important Law School. It is proposed to establish a Mahomedan University at Aligarh and a Hindu University has been inaugurated at Benares.

The principal educational institutions are:—

The Mahomedan Anglo-Oriental College, Aligarh—Principal, J. H. Towle.

The Central Hindu College, Benares—Principal, P. B. Adhikari, offg.

St. John's College, Agra—Principal, Rev. A. W. Davies.

Muir College, Allahabad—Principal, S. G. Jennings.

Queen's College, Benares—Principal, P. S. Burrell.

Canning College, Lucknow—Principal, M. B. Cameron.

Agra College—Principal, T. Cuthbertson Jones.

Reid Christian College, Lucknow—Principal, Rev. T. C. Badley.

Meerut College—Principal, William Jesse.

Woodstock College, Mussoorie—Principal, Rev. H. M. Andrews.

Bareilly College—Principal, J. H. Alderson.

Christian College, Allahabad—Principal, Rev. C. A. R. Janvier.

Christ Church College, Cawnpore—Principal, Rev. M. S. Douglas.

Isabella Thoburn College, Lucknow—Principal, Miss Robinson.

Thomason College, Roorkee—Principal, Mr. W. G. Wood, C.S.I.

King George's Medical College, Lucknow—Offg. Principal, Major J. W. D. Megaw, I.M.S.

Medical.

The Medical Department is in charge of an Inspector-General of Civil Hospitals. A Civil Surgeon is in charge and is responsible for the medical work of each district, and in a few of the larger stations he has an assistant. In two stations (Rankhet and Almora) Medical Officers in military employ hold collateral civil charge. There are eighty-three Assistant Surgeons in charge of important dispensaries and a large number of Indian hospital assistants. Lady doctors and female hospital assistants visit *purda nashin* women in their own homes and much good work is done in this manner.

The best equipped hospitals, for Indian patients are the Thomason Hospital at Agra and the Balrampur Hospital at Lucknow. The Ramsay Hospital for Europeans at Naini Tal is a first class institution and there are also the Lady Dufferin Hospitals. King George's Medical College and the hospital in connexion with it have been opened recently in Lucknow. The College is one of the best equipped in the country, with a staff of highly efficient professors, and the hospital is the first in the Provinces. There is an X-Ray Institute at Dehra Dun, where valuable research work has been carried out and the Pasteur Institute at Kasauli take cases from all parts of India, and there are sanatoria for British soldiers in the Hills.

Administration.

Lieutenant-Governor, The Hon. Sir Spencer Harcourt Butler, K.C.S.I., C.I.E. Appointed 15th February 1918.

Private Secretary, T. Lister, I.C.S.

Aid-de-Camp, Captain T. C. Twining.

Honorary Aides-de-Camp, Lieut.-Col. P. H. Clutterbuck, Lieut.-Col. J. H. E. Beer, C.I.E., V.D., Lieut.-Col. J. Walker, V.D., Hony. Capt. Subadar Major Chamu Singh Burathoki, Risaldar Major Qudrat Khan Bahadur.

Legislative Council of the Lieutenant-Governor.

President, The Lieutenant-Governor.

Vice-President, J. M. Holms, C.S.I.

Members.

Nawab Muhammad Muzammil-Ullah Khan, Khan Bahadur, of Bhikampur.

Kunwar Aditya N. Singh, of Benares.

Frederick James Pert.

Raja Sir Muhammad Tasadduk Rasul Khan, K.C.S.I.

Nawab Mumtaz-ud-daula Sir Muhammad F. Ali Khan, K.C.I.E., K.C.V.O., C.S.I., of Pahasu.

Mr. Ludovic Charles Porter, C.S.I., C.I.E.

S. H. Fremantle.

Samuel Perry O'Donnell, I.C.S.

Atul Chandra Chatarji, I.C.S.

Michael Keane, I.C.S.

George Gall Sim, I.C.S.

Herbert Morton Willmott.

Rai Janki Prasad Bahadur.

Col. C. Mactaggart, C.I.E., I.M.S.

C. F. de la Fosse.

F. Mackinnon.

H. R. C. Hailey.

H. C. Ferard.

W. E. Crawshaw.

Rai Anand Sarup Bahadur.

James Rae Pearson, C.I.E.

Henry Mayne Reid Hopkins.

Sidney Reginald Daniels, I.C.S.

Tara Dat Gairola.

Pandit Jagat Narayan.

Lala Madhusudan Dayal.

Munshi N. P. Ashthana.

Moti Lal Nehru.

Rai Sadanand Pande Bahadur.

Maharaja Sir Bhagwati Prasad Singh, K.C.I.E., of Balrampur.

Raja Kushalpal Singh.

Rai Ashthuja Prasad Bahadur

Saiyid Raza Ali.

Rai Shankar Sahai Saheb.

Radha Kishan Das.

C. Y. Chintamani.

Gokaran Nath Misra.

Sukbir Singh.

Raja Chandra Chur Singh.

Raja Moti Chand.

Nawab Muhammad Abdul Majid.

A. W. Ward.

Thomas Smith.

Saiyid Al-i-Nabi Khan Bahadur.

Sayid Wazir Hasan.

SECRETARIAT.

Chief Secretary to Government, S. P. O'Donnell.

Financial Secretary to Government, G. G. Sim, I.C.S.

Judicial ,, ,, M. Keane, I.C.S.

Secretary to Government, Public Works Dept. (*Buildings & Roads, & Railways*), H. M. Willmott.

Secretary to Government, Public Works Dept. (*Irrigation*), G. T. Barlow, C.I.E., (on leave); Officiating, A.W.E., Staudley.

Registrars, F. E. Lowe, A. Grant, A. M. Jelly, F. C. Richardson, C. St. L. Teyen, and F. L. E. Phipps.

BOARD OF REVENUE.

Members, J. M. Holms, C.S.I., J. S. Campbell, C.S.I., C.I.E.

MISCELLANEOUS APPOINTMENTS.

Opium Agent, Ghazipur, C. E. Wild.

Director of Land Records and Agriculture, H. R. C. Hailey.

Chief Conservator of Forests, P. H. Clutterbuck, C.I.E., V.D., F.R.G.S., F.Z.S., F.E.S.,

Director of Public Instruction, C. F. de la Fose.

Inspector-General of Police, W. S. Marris, *Sub. pro tem.*

Inspector-General of Civil Hospitals, Col. C. Mactaggart, M. A., M.B., C.I.E., I.M.S.

Sanitary Commissioner, Lieut.-Col. S. A. Harriss, I.M.S.

Inspector-General of Registration, George Bancroft Lambert, I.C.S.

Commissioner of Excise, T. A. H. Way.

Accountant-General, Wilfrid Alder, M.A., I.C.S.

Inspector-General of Prisons, Lt.-Col. S. H. Henderson, M.B., C.M., I.M.S.

Postmaster-General, Lionel Trunninger, C.I.E.

Chemical Analyser, Dr. E. H. Hankin.

LIEUTENANT-GOVERNORS OF THE NORTH-WESTERN PROVINCES.

Sir C. T. Metcalfe, Bart., G.C.B.	1836
The Right Hon. the Governor-General in the North-Western Provinces (Lord Auckland).	1838
T. C. Robertson	1840
The Right Hon. the Governor-General in the North-Western Provinces (Lord Ellenborough).	1842
Sir G. R. Clerk, K.C.B.	1843
James Thomson. Died at Bareilly. ..	1843
A. W. Begbie, *In charge*	1853
J. R. Colvin. Died at Agra.	1853
E. A. Reade, *In charge*	1857
Colonel H. Fraser, C.B., Chief Commissioner, N.-W. Provinces.	1857
The Right Hon. the Governor-General administering the N.-W. Provinces (Viscount Canning).	1858
Sir G. F. Edmonstone	1859
R. Money, *In charge*	1863
The Hon. Edmund Drummond	1863
Sir William Muir, K.C.S.I.	1868
Sir John Strachey, K.C.S.I...	1874
Sir George Couper, Bart., C.B.	1876

LIEUTENANT-GOVERNORS OF THE NORTH-WESTERN PROVINCES AND CHIEF COMMISSIONERS OF OUDH.

Sir George Couper, Bart, C.B., K.C.S.I.	1877
Sir Alfred Comyns Lyall, K.C.B.	1882
Sir Auckland Colvin, K.C.M.G., C.I.E. ..	1887
Sir Chas. H. T. Crosthwaite, K.C.S.I. ..	1892
Alan Cadell (*Officiating*)	1895
Sir Antony P. MacDonnell, K.C.S.I. (*a*) ..	1895
Sir J. J. D. La Touche, K.C.S.I.	1901

(*a*) Afterwards (by creation) Baron MacDonnell.

LIEUTENANT-GOVERNORS OF THE UNITED PROVINCES OF AGRA AND OUDH.

Sir J. J. D. La Touche, K.C.S.I.	1902
Sir J. P. Hewett, K.C.S.I., C.I.E.	1907
L. A. S. Porter, C.S.I. (*Officiating*).. ..	1912
Sir J. S. Meston. K.C.S.I.	1912
Sir Harcourt Butler, K.C.S.I., C.I.E. ..	1918

The Punjab.

The Punjab, or land of the five rivers, is so called from the five rivers by which it is enclosed, namely, the Jhelum, Chenab, Ravi, Beas and Sutlej. Together with the North-West Frontier Province and the Native State of Jammu and Kashmir which lie to the north, the Punjab occupies the extreme north-western corner of the Indian Empire, and with the exception of the above-mentioned province, comprises all of British India north of Sind and Rajputana and west of the river Jumna. Previous to October 1912, the Punjab with its feudatories embraced an area of 136,330 square miles and a population at the Census of 1911 of 24,187,750 (inclusive of 28,587 trans-frontier Baluchis) that is to say, about one-thirteenth of the area and population of the Indian Empire. But the formation of a separate province of Delhi reduced the area and population of the Punjab by about 450 square miles and 380,000 souls respectively. Of the total area of the Punjab, 36,551 square miles are in Native States (34 in number) with a population of 4,212,794, and 2,566 square miles are tribal territory on the western border of Dera Ghazi Khan district with a population of 28,587.

Physical Features.

The greater part of the Punjab consists of one vast alluvial plain, stretching from the Jumna in the east to the Suleman Range in the west. The north-east is occupied by a section of the Himalayas and the Salt Range forms its north-western angle. A few small spurs of the Aravalli mountain system traverse the extreme south-east and terminate in the Ridge at Delhi. The Punjab may be divided into five natural divisions. The Himalayan tract includes an area of 22,000 square miles, with a scanty population living scattered in tiny mountain hamlets. The Salt Range tract includes the districts of Attock, Rawalpindi and Jhelum and part of Shahpur district. Its physical configuration is broken and confused and the mountainous tracts of Murree and Kahuta approximate closely in characteristics to the Himalayan tract. Except in the hills, the rainfall leaves little margin for protection against distress in unfavourable seasons and irrigation is almost unknown. Skirting the base of the hills and including the low range of the Siwaliks, runs the narrow sub-montane tract. This tract, secure in an ample rainfall, and traversed by streams from the hills, comprises some of the most fertile and thickly populated portions of the province. Its population of over four millions is almost wholly agricultural and pastoral but it includes one large town in Sialkot. Of the plains of the Punjab, the eastern portion covers an area of some 36,000 square miles with a population of 10½ millions. East of Lahore, the rainfall is everywhere so far sufficient that cultivation is possible without irrigation in fairly favourable seasons, but over the greater part of the area the margin is so slight that, except where irrigation is employed, any material reduction in the rainfall involves distress, if not actual famine. Within the eastern plains lie the large cities of Lahore and Amritsar, and the population in comparison with the western Punjab is largely urban. The western plains cover an area of 59,000 square miles, with a population of a little over six millions. The rainfall in this area, heaviest in the north and east and decreasing towards the west and south, is everywhere so scanty that cultivation is only possible with the aid of artificial irrigation or upon the low-lying river-banks left moist by the retreating floods. In this very circumstance, these tracts find their scarcity against famine, for there cultivation is almost independent of rain, a failure of which means nothing worse than a scarcity of grass. So little rain is sufficient, and absolute drought occurs so seldom that the crops may be said never to fail from this cause. The western plains embrace the great colony areas on the Lower Chenab and Lower Jhelum Canals which now challenge the title of the eastern plains as the most fertile, wealthy and populous portions of the province. Multan and Lyallpur are the largest towns in the western area. Owing to its geographical position, its scanty rainfall and cloudless skies, and perhaps to its wide expanse of untilled plains, the climate of the Punjab presents greater extremes of both heat and cold than any other portion of India. The summer, from April to September, is scorchingly hot, and in the winter, sharp frosts are common. But the bright sun and invigorating air make the climate of the Punjab in the cold weather almost ideal.

The People.

Of the population roughly one half is Mahomedan, three-eighths Hindu and one-eighth Sikh. Socially the landed classes stand high and of these the Jats, numbering nearly five millions, are the most important. Roughly speaking, one half the Jats are Mahomedan; one-third Sikh and one-sixth Hindu. In distribution they are ubiquitous and are equally divided over the five divisions of the province. Next in importance come the Rajputs, who number over a million and a half. The majority of them are Mahomedans by religion; about a fourth are Hindus and a very few Sikhs. They are widely distributed over the province. Both Jats and Rajputs of the Punjab provide many of the best recruits for the Indian Army. In fact all the agricultural classes of the Punjab, except in the south-western districts, made a magnificent response to the appeal for recruits in the great war and the province's contribution of upwards of 400,000 men to the main power of the Empire speaks for itself. The Gujars are an important agricultural and pastoral tribe, chiefly found in the eastern half of the province and in the extreme north-west. In organisation they closely resemble the Jats and are often absorbed into that tribe. There are many minor agricultural tribes, priestly and religious castes (Brahmans, Sayads and Kureshis), most of whom are landholders, the trading castes of the Hindus (Khatris, Aroras and Banias) and trading castes of the Mahomedans (Khojas, Parachas and Khakhas), and the numerous artisan and menial castes. There are also vagrant and criminal tribes, and foreign elements in the population are represented by the Baluchis of Dera Ghazi Khan and neighbouring

districts in the west, who number about half a million and maintain their tribal system, and the Pathans of the Attock and Mianwali districts. Pathans are also found scattered all over the province engaged in horse-dealing, labour and trade. A small Tibetan element is found in the Himalayan districts.

Languages.

The main language of the province is Punjabi, which is spoken by more than half the population. Western Punjabi may be classed as a separate language, sometimes called Lahnci, and is spoken in the north and west. The next most important languages are Western Hindi, which includes Hindustani, Urdu (the polished language of the towns) and other Hindi; Western Pahari, which is spoken in the hill tracts; and Rajasthani, the language of Rajputana. Baluchi, Pushto, Sindhi and Tibeto-Burman languages are used by small proportions of the population.

Agriculture.

Agriculture is the staple industry of the province, affording the main means of subsistence to 56 per cent. of the population. It is essentially a country of peasant proprietors. About one-sixth of the total area in British districts is Government property, the remaining five-sixths belonging to private owners. But a large part of the Government land is so situated that it cannot be brought under cultivation without extensive irrigation. Thus the Lower Chenab Canal irrigates nearly 1,900,000 acres of what was formerly waste land and the Lower Jhelum Canal, 390,000 acres, and the Lower Bari Doab Canal, when the colonisation scheme is completed, will add 1,200,000 acres to this total. Large areas in the hills and elsewhere which are unsuited to cultivation are preserved as forest lands, the total extent of which is about 8,700 square miles. Of the crops grown, wheat is the most important and the development of irrigation has led to a great expansion of the wheat area, which now occupies in an average year over 8¾ millions of acres. The average annual outturn of wheat is 3,000,000 tons, valued at present prices at approximately £20,000,000. Next in importance to wheat is gram, the average annual produce of which is a million tons valued at £5,000,000. Other important staples are barley, rice, millets, maize, oilseeds (rape, toria and sesamum,) cotton and sugarcane. Cotton is grown generally throughout the province but the ravages of boll-worm have affected the popularity of the crop. The cotton grown is of the short stapled variety, known as 'Bengals'. The country being preponderantly agricultural, a considerable proportion of the wealth of the people lies in its live-stock. The latest cattle census gives the following figures:—cattle, nearly 8,000,000 head; buffaloes, about 850,000; bovine young stock, 3,800 000; sheep, 4,500,000, goats, 4,250,000. Large profits are derived from the cattle and dairy trades and wool is a staple product in the south-west in Kulu and Kangra and throughout the plains generally. The production of hides and skins is also an important industry.

Industries.

The mineral wealth of the Punjab is small, rock salt, saltpetre, and limestone for road-building being the most important products. There are some small coal mines in the Jhelum district, with an output of about 50,000 tons a year, and gold-washing is carried on in most of the rivers, not without remunerative results. Iron and copper ores are plentiful but difficulties of carriage and the absence of fuel have hitherto prevented smelting on a large scale. The Punjab is not a large manufacturing country, the total number of factories being only 184, the majority of which are devoted to cotton ginning, cleaning and pressing. Cotton weaving as a domestic industry is carried on by means of hand looms in nearly every village. The Salvation Army has shown considerable enterprise in improving the hand-weaving industry. Blankets and woollen rugs are also produced in considerable quantities and the carpets of Amritsar are famous. Silk-weaving is also carried on and the workers in gold, silver, brass, copper and earthernware are fairly numerous and ivory carving is carried on at Amritsar and Patiala. The trade of the province is steadily expanding, the total internal trade being valued at 65½ crores of rupees. The external trade with Afghanistan, Ladakh and Tibet is valued at 34 lakhs.

Administration.

The administrative functions of Government are performed by a Lieutenant-Governor, appointed by the Governor-General with the approval of the Crown. The Lieutenant-Governor in practice is always a member of the Indian Civil Service though military members of the Punjab Commission are eligible for the position. The Punjab Commission, the body which is responsible for the Civil administration of the province, is recruited from the Indian Civil Service and the Provincial Civil Service. Up to the date of the separation of the North-West Frontier Province from the Punjab, one-fourth of the cadre was drawn from the Indian Army. The business of Government is carried on through the usual Secretariat which consists of three Secretaries, designated (1) Chief, (2) Revenue and (3) Financial Secretaries, and three Under-Secretaries. There is also at present an Additional Secretary. In the Public Works Department, there are also three Secretaries (Chief Engineers), one in the Buildings and Roads Branch and two in the Irrigation Branch. The heads of the Police and Educational Departments are also Under-Secretaries to Government. The Government spends the winter in Lahore and the summer (from the middle of May to the middle of October) in Simla. The Lieutenant-Governor has no Executive Council, but is assisted in legislative business by a Legislative Council of 28 members, of whom 11 are elected and 17 nominated by the Lieutenant-Governor. Of the nominated members, not more than 11 may be officials, in addition there may be two nominated expert members. Under the Lieutenant-Governor, the province is administered by five Commissioners (for Ambala, Jullundur, Lahore, Rawalpindi and Multan) who exercise general control over the Deputy Commissioners—28 in number—each of whom is in charge of a district. A district on an average contains four tahsils, each consisting of about 300 villages. The Deputy Commissioner is usually a Covenanted Civilian

or military member of the Punjab Commission, although five Deputy Commissionerships are "listed" for Provincial Civil Servants The Deputy Commissioner has under him one or more Assistant Commissioners (Covenanted Civilians) and one or more Extra Assistant Commissioners (Provincial Civilians). In some cases, one or more tahsils form a subdivision under the charge of a sub-divisional officer who has wide powers. The tahsil is in charge of a Tahsildar, in some cases assisted by one or more Naib Tahsildars. The village is under a Lambardar or headman and in most districts the villages are grouped into zails, each under a zaildar. The lambardars and zaildars are "village officers" and not Government-servants. The district Land Records and Excise staff, though organised for special departmental purposes, is available for general administrative work. The Native States of the province are arranged for the purposes of supervision into five groups, each under the charge of a Political Agent. Except in the case of the Sikh Phulkian States (Patiala, Jhind and Nabha) and the Bahawalpur Agency, the Political Agent is either the neighbouring Commissioner or Deputy Commissioner. The principal heads of Department in the province are the two Financial Commissioners (who are the highest Court of Revenue jurisdiction, and heads of the departments of Land and Separate Revenue and of Agriculture and the Court of Wards), the three Chief Engineers, the Inspector-General of Police, the Director of Public Instruction, the Inspector-General of Prisons, the Inspector-General of Civil Hospitals, the Sanitary Commissioner, the Conservator of Forests, the Director of Agriculture and Industries, the Inspector-General of Registration, the Registrars of Co-operative Credit Societies and Joint Stock Companies and the Legal Remembrancer. The Accountant-General, the Postmaster-General, the Director of Telegraph Engineering, and the Agent, North-Western Railway, represent Imperial Departments under the Government of India.

Justice.

The administration of justice is entrusted to a Chief Court, which is the final appellate authority in civil and criminal cases, and has powers of original criminal jurisdiction in cases where European British subjects are charged with serious offences and original civil jurisdiction in special cases. The Court sits at Lahore and is composed of a Chief Judge and four puisne judges (either Civilians or barristers), a sixth additional judge whose appointment is sanctioned for two years and a seventh and eighth additional judge whose appointment is sanctioned for one year. For some years past there has been a strongly supported movement in the province in favour of raising the Court to the status of a High Court, and the Secretary of State has sanctioned the proposal though the change is expected to take effect this year. Subordinate to the Chief Court are the District and Sessions Judge (22 in number) each of whom exercises civil and criminal jurisdiction in a civil and sessions division comprising one or more districts. They hear most of the first appeals in Civil suits and try sessions cases and hear criminal appeals from the district and first class magistrates. One or two divisions have an additional judge and in many districts a Subordinate Judge exercising unlimited civil jurisdiction, is appointed to assist the District Judge but the majority of civil suits are tried in the first instance by Munsifs whose jurisdiction is limited to suits not exceeding Rs. 1,000 in value. The assistants to Deputy Commissioners are always invested with the powers of a Munsif, but the former practice of investing Tahsildars with Munsif's powers is being gradually discontinued. At Lahore, Amritsar and Simla there are Courts of Small Causes. The Deputy Commissioner is the District Magistrate and controls the subordinate Criminal Courts of the District. All the assistants of the Deputy Commissioner as well as the District and Subordinate Judges, but not the Munsifs, are invested with magisterial powers. Tahsildars usually exercise the powers of a second class magistrate and Naib Tahsildars those of the third class, and considerable assistance is obtained from Honorary Magistrates who sit either singly or as a bench. In districts in which the Frontier Crimes Regulation is in force the Deputy Commissioner on the finding of a Council of Elder (Jirga) may pass sentence up to four years imprisonment. In all cases capital sentences require the confirmation of the Chief Court. Special Revenue Courts to decide all suits regarding tenant right, rents and cognate matters in which civil courts have no jurisdiction have been established under the Punjab Tenancy Act. The Financial Commissioners are the final court of appeal in revenue cases.

Local Government.

Local control over certain branches of the administration is secured by the constitution of district boards exercising authority over a district and of municipalities exercising authority over a city or town. A few districts have local boards which exercise authority over a tahsil. These bodies are composed of members either nominated by Government or elected by the people and they are empowered to spend the funds at their disposal on schools and dispensaries, vaccination, sanitation, roads and rest houses and general improvements. The funds of district boards are derived mainly from a cess on the land revenue of the district supplemented by grants from Provincial Funds, and those of municipalities from octroi, local taxation and Government grants. In the smaller towns which are known as "notified areas", a simpler form of government than the municipal system is in force. Where the elective principle is in force as regards both district boards and municipalities, the public shows very little interest in the elections, except in a few cases where sectarian feeling runs high.

Finance.

Under the present system of decentralisation in finance, the Imperial Government delegates to the Punjab Government the control of expenditure on the ordinary administrative services together with the whole or a certain proportion of certain heads of revenue sufficient to meet those charges. Of the various heads of revenue post office, telegraphs, railways, opium and salt are entirely Imperial. Land revenue, stamps, excise, income-

tax and major irrigation works are divided between the Imperial and Provincial Governments in the proportion of one half to each. Minor irrigation works and some minor heads are divided in varying proportions while the revenue from forests, registration, courts of law, jails, police and education are wholly provincial as well as the income of district boards and municipalities. The Budget for 1917-18 shows a total revenue of Rs. 5,50,00,000, and a total expenditure of Rs. 5,49,00,000, leaving a closing balance of Rs. 1,91,00,000.

Public Works.

As was stated in the section on "Administration" the Public Works Department is divided into two branches, one for Buildings and Roads and the other for Irrigation. In the former branch, under the Chief Engineer, the province is divided into three circles under Superintending Engineers and 11 divisions under Executive Engineers. The primary object of this branch is the construction and maintenance of Imperial and Provincial works, but it also assists municipalities and district boards. The Irrigation branch is under two Chief Engineers, one of whom is also Chief Engineer of Irrigation Works in the North-West Frontier Province. Under them are nine Superintending Engineers in charge of circles and 39 Executive Engineers in charge of divisions. In addition to the work of construction and maintenance Irrigation Officers are responsible for the assessment of water rates leviable on irrigated areas and in several districts where the land revenue demand is assessed on the fluctuating principle, for the formulation of this demand on irrigated crops as well.

Irrigation.

The canal system of the Punjab is admittedly one of the greatest achievements of British rule in India. Not including the enormous Triple Canal project recently completed, the total irrigated area in British districts and Native States amounts to 8,269,233 acres. The Beas is the only one of the great rivers of the province from which no canal takes off. The Indus provides supplies for two large series of inundation canals, one on either bank. Taking off from the Jhelum is the Lower Jhelum perennial canal, with 150 miles of main channel and 1,000 miles of distributaries and lower down the river is a large series of inundation canals. The Lower Chenab perennial canal takes off from the Chenab and comprises 427 miles of main channel and branches and 2,278 miles of branches, while below the junction of the Chenab and Ravi rivers is a series of inundation canals on both banks. The Ravi provides supplies for the Upper Bari Doab Canal, which has 370 miles of main line and branches and 1,571 miles of distributaries. Some small inundation canals and the Sidhani system with a length of 200 miles also take off from the Ravi. The Sirhind Canal, which has a main line and branches of 538 miles and distributaries amounting to 3,703 miles, takes off from the Sutlej, and there are two systems of inundation canals deriving their supplies from the Upper and Lower Sutlej respectively in addition to the Grey Canals maintained on the co-operative system in the Ferozepore district and a vast series of inundation canals in Bahawalpur State. The Western Jumna Canal, which takes off from the right bank of the Jumna, has a main line and branches of 377 miles and distributaries of 1,764 miles. The Triple Canal project is intended to carry surplus water from the Jhelum and the Chenab to supplement the scanty supplies in the lower reaches of the Ravi and incidentally to afford irrigation to the tracts through which the supply channels pass. The three canals included in the project are known as the Upper Jhelum, Upper Chenab and Lower Bari Doab Canals. Of these the Upper Chenab was opened in April 1912 and the Lower Bari Doab in April 1913 and the Upper Jhelum in December 1915. The most interesting feature of this great work is the level crossing at Balloki, 40 miles from Lahore, where the Upper Chenab canal supply is passed across the Ravi into the Lower Bari Doab Canal. The revised estimate of the cost of the whole scheme is £6¾ millions. The scheme is expected to serve an area of 1,870,000 acres annually.

Police.

The Police force is divided into District and Railway Police. The combined force is under the control of the Inspector-General, who is a member of the gazetted force and has under him five Deputy Inspectors-General, and a sixth Deputy Inspector-General in charge of Criminal Investigation, the Police Training School and Finger Print Bureauat Phillaur. The Railway Police are divided into two districts, Northern and Southern, under an Assistant Inspector-General. The District Police are controlled by Superintendents, each of whom is in charge of a district, and has under him one or more Assistant Superintendents. The district is divided into circles under charge of Inspectors, and again into thanas in charge of a Sub-Inspector. The staff of a thana consists on an average of one Sub-Inspector, two head constables and 10 constables. A service of Provincial Police officers has also been established consisting of 18 Deputy Superintendents, who are employed as assistants to the Superintendents. The total police force of the province exclusive of gazetted officers, consists of 980 officers and about 20,000 men, practically half of whom are armed with revolvers and bored out rifles. The village police or chaukidars are under the control of the Deputy Commissioner of each district not of the Police Superintendent. The cost of the Police Force is 62¾ lakhs.

Education.

Although the Punjab is usually considered rather a backward province, education has made great strides especially in the last ten years. Government maintain the Government College at Lahore, the Central Training College at Lahore, a Training Class for European teachers at Sanawar (Simla Hills), normal schools at the headquarters of each division, and High Schools at the headquarters of each district, and the Lawrence Military Asylum at Sanawar for European children. Two more Government Colleges, at Ambala and Muttra are in contemplation. There are in the province nine arts colleges (one of them Oriental) ; 6 professional colleges

for males and 1 for females; 130 High Schools for boys and 18 for girls; 241 middle schools for boys and 43 for girls; 6,492 Primary Schools for boys and 855 for girls; 54 schools for special instruction for boys and 12 for girls. The number of pupils attending schools of all classes, both male and female, is 563,154. The nine arts colleges are:—The Government, Oriental, Forman Christian, Dayanand, Islamia and Dayal Singh Colleges at Lahore; Khalsa, Amritsar; Murray, Sialkote; Gordon, Rawalpindi. Professional education is represented by the Law, Medical and Veterinary Colleges at Lahore, the Agricultural College at Lyallpur, the Clerical and Commercial School at Amritsar, the Engineering School at Rasul, the Mayo School of Art and the Railway Technical School, both at Lahore. There are eight Industrial Schools in the Province maintained by Municipalities or District Boards and others maintained by Missionary bodies, the Arya Samaj, etc., which receive grants-in-aid. The education of the domiciled community is provided for by a number of secondary boarding schools in hill stations and of primary schools in the plains. The aristocracy of the province is provided for by the Aitchison Chiefs' College for boys and the Queen Mary's College for girls, both at Lahore.

The Education Department is administered by the Director of Public Instruction, who has under him an Inspector of Schools in each civil division with two or more assistants, a District Inspector, with assistants, in each district, two Inspectresses of girls' schools and an Inspector of European schools. Higher education is controlled by the Punjab University (incorporated in 1882) which has the Lieutenant-Governor as *ex-officio* Chancellor, a Vice-Chancellor appointed by Government and a Senate. In addition to the nine arts colleges already mentioned and the Law and Medical Colleges at Lahore, St. Stephen's College, Delhi, and the Hindu College, Delhi, and six other colleges in Kashmir, Patiala, Bahawalpur, Kapurthala and the North-West Frontier Province are affiliated to the Punjab University.

Medical.

The Medical Department is controlled by the Inspector-General of Civil Hospitals (a member of the Indian Medical Service) who also supervises the departments of the Chief Plague Medical Officer and the Chief Malaria Medical Officer. Sanitation is controlled by the Sanitary Commissioner (also a member of the Indian Medical Service) who has under him two Deputy Sanitary Commissioners and is advised by the Sanitary Board, with the Sanitary Engineer as Technical Adviser. Medical work in the districts is in charge of the Civil Surgeons, of whom fourteen before the War were members of the Indian Medical Service and others Military Assistant Surgeons and uncovenanted Medical Officers, chiefly Civil Assistant Surgeons. The Mayo Hospital at Lahore and special railway, canal and police hospitals are maintained by Government, but the ordinary hospitals and dispensaries in the districts are maintained by municipal or district funds. Certain private institutions such as the Walker Hospital at Simla and many mission dispensaries receive grants-in-aid. The Mayo Hospital at Lahore has been greatly extended and improved as a memorial to King Edward VII, and was formally opened by Lord Hardinge in December 1915. The total number of patients treated at all hospitals and dispensaries in the year is over four and a half millions, including nearly 75,000 in-patients. A temporary department to combat plague has been organised under the Chief Medical Plague Officer. In the districts the Civil Surgeons are generally in charge of the operations against plague, but additional officers are employed from time to time. There is only one lunatic asylum in the Province at Lahore, but there are ten leper asylums. The Pasteur Institute at Kasauli performs the functions of a provincial laboratory for the Punjab. Vaccination is supervised by the Sanitary Commissioner, but is more particularly the concern of the Deputy Sanitary Commissioner, who has under him a special staff. Civil Surgeons also have a local staff of vaccinators under them.

Administration.

Lieutenant-Governor, Sir Edward Maclagan.

PERSONAL STAFF.

Private Secretary, Lieut.-Col. E. C. Bayley C.I.E., I.A.

Honorary Aides-de-Camp, Lieut.-Col. W. T. Wright, Hony. Capt. Ghulam Muhammad Khan, Hon. Capt. Surja, and Hon. Capt. Bishan Singh.

LEGISLATIVE COUNCIL.

President, The Lieutenant-Governor.

MEMBERS.

Nominated.

H. J. Maynard, C.S.I., I.C.S.
D. W. Aikman.
O. F. Lumsden, .C.S.
J. A. Richey.
H. D. Craik, I.C.S.
C. A. H. Townsend, I.C.S.
C. J. Hallifax, C.B.E., I.C.S.
Col. R. C. MacWatt.
Sardar Bahadur Gajjan Singh.
Khwajah Yusuf Shah, Khan Bahadur.
Rai Bahadur Ram Saran Das, C.I.E.
Rai Bahadur Pandit Sheo Narayan
Nawab Sir Bahram Khan.
E. W. Parker.
Sardar Gopal Singh.

Elected.

J. Currie.
Lala Jowahar Lal Bhargava.
Raizada Bhagat Ram.
Sayad Makhdum Rajan Shah.
Dewan Bahadur Dewan Daulat Rai.

Bakhshi Sohan Lal of Lahore.
Malik Muhammad Amin Khan of Shamsabad.
Chaudhri Lal Chand.
Khan Saheb Mirza Ikram Ullah Khan.
Khan Bahadur Sayad Mehdi Shah.
Khan Bahadur Mian Fazl-i-Husain.

SECRETARIAT.

Chief Secretary, J. P. Thompson, I.C.S.
Revenue Secretary, H. D. Craik, I.C.S.
Financial Secretary, O. F. Lumsden.

Registrar, James Alfred Weston.

PUBLIC WORKS DEPARTMENT.

Irrigation Branch.

Secretaries, F. W. Woods; W. F. Holms.

Buildings and Roads Branch.

Secretary, D. V. Aikman, C.I.E.

REVENUE DEPARTMENT.

Financial Commissioners, H. J. Maynard, I.C.S., on leave, and P. J. Fagan, I.C.S.

Director of Agriculture and Industries, C. A. H. Townsend, B.A., I.C.S.

Director of Land Records, Inspector-Genl. of Registration, and Registrar-General, D. J. Boyd.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, James Alexander Richey, M.A.

Inspector-General of Police, Lieut.-Col. H. T. Dennys, I.A.

Inspector-General of Registration, Shaikh Rahim Bakhsh.

H. A. Close (N.-W. Frontier Province).

Conservator of Forests, R. McIntosh.

Inspector General of Civil Hospitals and Sanitary Commissioner, Colonel Robert Charles Macwatt, C.I.E., I.M.S.

Inspector General of Prisons, Lt.-Col. E. L. Ward.

Accountant-General, F. D. Gordon, M.A.

Postmaster-General, Philip Graham Rogers, I.C.S.

Registrar of Co-Operative Credit Societies and Joint Stock Companies, H. Calvert, B.S.C.

LIEUTENANT GOVERNORS OF THE PUNJAB.

Sir John Lawrence, Bart., G.C.B.	1859
Sir Robert Montgomery, K.C.B.	1859
Donald Friell McLeod, C.B.	1865
Major-General Sir Henry Durand, K.C.S.I., C.B., died at Tonk, January 1871.	1870
R. H. Davies, C.S.I.	1871
R. E. Egerton, C.S.I.	1877
Sir Charles U. Aitchison, K.C.S.I., C.I.E.	1882
James Broadwood Lyall	1887
Sir Dennis Fitzpatrick, K.C.S.I.	1892
William Mackworth Young, C.S.I. ..	1897
Sir C. M. Rivaz, K.C.S.I.	1902
Sir D. C. J. Ibbetson, K.C.S.I., resigned 22nd January 1908.	1907
T. G. Walker, C.S.I. (*offg.*)	1907
Sir Louis W. Dane, K.C.I.E., C.S.I. ..	1908
James McCrone Douie (*offg.*)	1911
Sir M. F. O'Dwyer, K.C.S.I.	1913
Sir Edward Maclagan	1918

Burma.

The Province of Burma lies between Assam on the North-West and China on the North-East, and between the Bay of Bengal on the West and South-West and Siam on the South-East. Its area, including the district of Putao constituted in February 1914, is approximately 270,000 square miles, of which 172,000 are under direct British Administration, 31,000 belong to independent and 67,000 to semi-independent Native States. The main geographical feature of the country is the series of rivers and hills running fan-like from North to South with fertile valleys in between, widening and flattening out as they approach the Delta. Differences of elevation and rainfall produce great variations in climate. The coastal tracts of Arakan and Tenassein have a rainfall of about 200 inches, the Delta less than half that amount. The hot season is short and the monsoon breaks early. The maximum shade temperature is about 96° the minimum about 60°. North of the Delta the rainfall decreases rapidly to 30 inches in the central dry zone which lies in a "rain shadow" and has a climate resembling that of Bihar. The maximum temperature is twenty degrees higher than in the wet zone, but this is compensated by a bracing cold season. To the north and east of the dry zone lie the Kachin hills and the Shan plateau. The average elevation of this tableland is 3,000 feet with peaks rising to 9,000. Consequently it enjoys a temperate climate with a rainfall of about 70 inches on the average. Its area is over 50,000 square miles. There is no other region of similar area in the Indian Empire so well adapted for European colonization. The magnificent rivers, the number of hilly ranges (Yomas) and the abundance of forests, all combine to make the scenery of Burma exceedingly varied and picturesque.

The People.

The total population of Burma at the census of 1911 was 12,115,217. Of this total, 7,642,204 are Burmans, 996,420 Shans, 919,641 Karens. 239,953 Kachins. 306,486 Chins, 344,123 Arakanese and 320,629 Talaings. There is also a large alien population of 108,877 Chinese and about 600,000 Indians, while the European population is 24,355.

The Burmans, who form the bulk of the population, belong to the Tibetan group and their language to the Tibeto-Chinese family. They are essentially an agricultural people, 80 per cent. of the agriculture of the country being in their hands. The Burmese, and most of the hill tribes also, profess Buddhism, but Animism, or the worship of nature spirits, is almost universal. The interest taken by the Burmese in the course of the war, their response to the call for recruits and their generous contributions to war loans and charitable funds seem to show that their apathy towards the government of the country is giving way to an intelligent loyalty to British rule. In appearance the Burman is usually somewhat short and thick set with Mongolian features. His dress is most distinctive and exceedingly comfortable. It consists of a silk handkerchief bound round his forehead, a loose jacket on his body and a long skirt or loongyi tied round his waist, reaching to his ankles. The Burman women, perhaps the most pleasing type of womanhood in the East, lead a free and open life, playing a large part in the household economy and in petty trading. Their dress is somewhat similar to the man's minus the silk kerchief on the head, and the loongyi is tucked in at the side instead of being tied in front. A well dressed and well groomed Burmese lady would, for grace and neatness, challenge comparison with any woman in the world.

Communications.

The Irrawaddy, and to a less extent the Chindwin, afford great natural thoroughfares to the country. At all seasons of the year these rivers, especially the Irrawaddy, are full of sailing and steam craft. In the Delta the net-work of waterways is indeed practically the only means of communication. The Irrawaddy Flotilla Company, with a fine fleet of mail, cargo and ferry boats, gives the Irrawaddy and the Delta rivers and creeks a splendid river service.

The Burma Railways Company has a length of 1,600 miles open line. The principal lines are from Rangoon to Mandalay; from Sagaing to Myitkyina, the most northern point in the system; the Rangoon-Prome line; and the Pegu-Martaban line, which serves Moulmein on the further bank of the Salween River. An important branch line runs from Thazi on the main line across the Meiktila and Myingyan Districts to Myingyan Town on the Irrawaddy. Another branch goes from Sagaing on the Irrawaddy to Alon on the Chindwin. A small branch on the Sagaing-Myitkyina line runs from Naba to Katha on the Irrawaddy. A branch on the right bank of the Irrawaddy runs from Bassein to Kyangin. A ferry at Henzada connects this branch with another branch running from Letpadan on the Prome line to the left bank of the Irrawaddy at Tharawaw. An important line, the Southern Shan States Railway, is open as far as Aungban, 7 miles beyond Kalaw, the future hill-station of the province, and 70 miles from Thazi, the junction with the Rangoon-Mandalay main line. The new line will end thirty miles further east at Yawnghwe, the principal town in the rich valley of the Nam Pilu. The Northern Shan States railway runs from Myohaung Junction, 3 miles south of Mandalay, to Lashio.

The length of metalled roads is nearly 2,000 miles and of unmetalled roads nearly 11,000. The number of roads is for a rich province like Burma quite inadequate. One of the most urgent needs of the Province is a very generous extension of roads both metalled and unmetalled. The newly-constituted Committee on Roads and Communications will no doubt effect rapid improvement when funds become available. The imperial grant of 50 lakhs spread over four or five years went a very little way towards making good deficiencies, and the proposal to provide funds by means of a tax on rice exports was not approved.

A revision of the Provincial settlement is urgently required. No arrangement can be satisfactory which does not recognize the claim of Burma, as a new and undeveloped country, to separate treatment. She is taxed far more highly than any other province and her surplus should be used to a far greater extent than hitherto for capital expenditure on development, and not swept into the Imperial coffers.

Industry.

Agriculture is the chief industry of the province and supports nearly three-fourths of the population. The nett total cropped area is 14½ million of acres, which more than half a million acres, are cropped twice. Irrigation works supply water to 1¾ million acres. The main crop is paddy, of which some seven million tons are produced, and two and three quarter million tons of rice are available for export. In 1915-16 the actual exports were lower than in any of the previous nine years except 1911-12, and the price realized six crores of rupees below the figure for 1913-14. In 1916-17, though rates for tonnage to Europe rose as high as £14 and never fell below £7-10-0, compared with an average rate of £1-5-10 for the four years preceding the war, exports of rice and paddy rose by over 50,000 tons to 2,243,204, valued at Rs. 22,16,80,000 or about two and a half crores more than in 1915-16. India took nearly half the export. Rice forms 59 per cent. of the total exports. Over 8,000 tons of cotton are produced, 106,000 tons of groundnuts, and 90,000 tons of sesamum. Maize (35,000 tons) and millet (79,000 tons) are the other chief crops.

Forests play an important part in the industrial life of the Province. The forest reserves cover nearly 30,000 square miles, while unclassed forests are estimated at about 114,000 square miles. Government extracts some 80,000 tons of teak annually, private firms, of whom the Bombay Burma Trading Corporation and Steel Brothers are the chief, extract over 300,000 tons. Other timber extracted by purchasers amounts to nearly 300,000 tons and firewood 720,000 tons. The gross revenue from forests is 127 lakhs of rupees, the net revenue 76 lakhs.

The war has given a great impetus to the exploitation of the mineral resources of the country and there has been a rapid increase in the number of mines. Wolfram and tin mines in Tenasserim have especially developed. Government has aided their development by the appointment of special officers, the importation of labour and the construction of roads Nearly 4,000 tons of wolfram worth seventy-three lakhs of rupees are how produced annually and the output grows steadily. Burma is the chief source of the world's supply of this important mineral. The outturn of tin ore has risen in seven years from less than a hundred tons to five hundred tons, valued at even lakhs of rupees. The Southern Shan States contributes over two-fifths of the total. Silver, lead and zinc are extracted by the Burma Mines Company at Bawdwin in the Northern Shan States. Copper in small quantities is also found there. There are small deposits of Molybdenite in Tavoy and Mergui and of platinum in Mytkyina. Antimony is found in large quantities in Amherst district in an area at present too difficult of access for profitable working. The annual output is about 14,000 tons of lead worth nearly fifty lakhs of rupees, 800,000 ounces of silver worth fourteen lakhs, and over 3,000 tons of zinc of zinc ore valued at Rs. 88,000. The output of precious stones from the ruby mines has declined since the war began, but the stones won annually are still worth over five and a half lakhs. Gold dredging in the Myitkyina District has proved unprofitable. The latest returns shew only 1,900 ounces as the result of a year's work and the company will shortly be wound up. From the mines in the Hukong valley jade and amber worth little over a lakh and a half are won. Next in importance for war purposes to wolfram and far exceeding it in commercial value is petroleum. The oldest and largest oil field in the province is at Yenangyaung in Magwe district where the Burma Oil Company has its chief wells. But borings in other districts have shown that the oil-bearing strata extend over the whole of the dry zone, and the output from the smaller fields in Myingyan, Pakokku and Minbu districts is now considerable, while the wells sunk in Thayetmyo and Prome districts are also showing satisfactory returns. The annual output is three hundred million gallons worth Rs. 170 lakhs. Two-thirds of the total production comes from the Yenangyaung field, whence it is carried 300 miles in pipes to the oil refineries at Syriam on the Rangoon river. The revenue from minerals is roughly Rs. 351 lakhs.

The area under rubber is 60,000 acres. The plantations are young and as the trees come into bearing production increases rapidly. The exports of rubber have more than doubled in two years and in 1916-17 exceeded 1,000 tons. But the planting of new ground is not on a scale to meet the demands for rubber, and Government has endeavoured by free grants of suitable land to stimulate planting. On this as on other industries of Burma the mischievous activities of the company promoter during the great "boom" cast a blight from which it is only just recovering. The bulk of the rubber is grown in Tenasserim division, but there are large plantations near Rangoon and in the wet zone of Upper Burma near Myitkyina.

Manufactures.

There are less than 500 factories, over three-fifths of which are engaged in milling rice and over one-fifth are sawmills. The remainder are chiefly cotton ginning mills, oil mills for the extraction of oil from groundnuts, and oil refineries connected with the petroleum industry. The average daily number of operatives is under 70,000 At the Census of 1911, 469,743 or only 6·6 of the total population were engaged outside agriculture and production.

As is the case in other parts of the Indian Empire, the imported and factory-made article is rapidly ousting the home-made and indigenous. But at Amarapura in the Mandalay District a revival has taken place of hand silk-weaving. Burmese wood-carving is still famous and many artists in silver still remain, the finish of whose work is sometimes very fine. Bassein and Mandalay parasols are well known and much

admired in Burma. But perhaps the most famous of all hand-made and indigenous industries is the lacquer work of Pagan with its delicate patterns in black, green and yellow traced on a ground-work of red lacquer over bamboo. A new art is the making of bronze figures. The artists have gone back to nature for their models, breaking away from the conventionalized forms into which their silver work had crystallized, and the new figures display a vigour and life that make them by far the finest examples of art the province can produce.

Trade.

The total value of the foreign trade in 1916-17 was 3,139 lakhs, an increase of 18 per cent. compared with the previous year but 850 lakhs below the returns for the best year before the war. Imports amounted to 1,185 lakhs or 9 per cent. more than in the previous year. Rangoon, the only port with facilities for distribution, took 89·97 per cent. of the foreign trade and 82·47 of the Indian trade. Indian trade rose from 2,631 to 2,805 lakhs. The net customs duty was 165¼ lakhs or 26 per cent. more than in 1915-16. The shortage of shipping and the enormous cost of freight continued to hamper trade. Only articles of export required for war purposes, such as lead, wolfram, rubber and cotton, shew any marked increase. The exports of rice and paddy to foreign countries totalled 1,215,277 tons, 25 per cent. more than in the previous year, but over 40 per cent. less than in 1912-13. Increase of prices accounts for a considerable part of the increase of total trade, but after allowances have been made for the inflation of prices it is clear that there was a great recovery during the year.

The most important item of merchandise imported into Rangoon is manufactured cotton, which accounts for 32 per cent. of the total import trade. These imports are valued at Rs. 376 lakhs. In 1915-16 the United Kingdom took 44 per cent. and the rest of the British Empire 26 per cent. of the total import and export trade of the province.

Administration.

In 1897 the Province, which had formerly been administered by a Chief Commissioner, was raised to a Lieutenant-Governorship. The head of the Province is therefore now the Lieutenant-Governor. He has a Council of seventeen members, one of whom is elected by the Burma Chamber of Commerce, one by the Rangoon Trades Association and the remaining fifteen are nominated by the Lieutenant-Governor. Not more than seven members may be official; the rest must be non-officials, and at least four must be selected from the Burmese population, one from the Indian and one from the Chinese community.

Burma is divided administratively into Upper Burma (including the Shan States and Chin Hills) and Lower Burma. The Shan States are administered by the Chiefs of the States, subject to the supervision of the Superintendents in the case of the Northern and Southern Shan States, and to the supervision of the Commissioners of the adjoining Divisions in the case of the other States. The Civil, Criminal and Revenue administration is vested in the Chief of the State, subject to the restrictions contained in the sanad. The law administered is the customary law of the State.

The Chin Hills are administered by a Superintendent.

Under the Lieutenant-Governor are eight Commissioners of divisions, four in Upper and four in Lower Burma. Commissioners in Upper Burma and the Commissioner of the Arakan Division are ex-officio Sessions Judges, but the other three Commissioners have been relieved of all judicial work.

Under the Commissioners are 40 Deputy Commissioners in charge of districts including the Police officers in charge of the Hill Districts of Arakan and the Salween District, who exercise the powers of a Deputy Commissioner. Deputy Commissioners are also District Magistrates, Collectors, and Registrars, except in Rangoon, where there is both a District Magistrate and a Collector. Subordinate to the Deputy Commissioner are Assistant Commissioners, Extra Assistant Commissioners and township officers, called Myooks. In the villages are the village headmen, Thugyis, assisted in Lower Burma by the Seelngaungs (rural policemen in charge of ten houses). The revenue administration is controlled by a Financial Commissioner assisted by two Secretaries. Subordinate Departments are in charge of a Commissioner of Settlements and Land Records, a Director of Agriculture, a Superintendent of the Civil Veterinary Department and a Registrar of Co-operative Credit Societies.

Justice.

The administration of Civil and Criminal Justice is under the control of the Chief Court of Lower Burma with five judges, and of the Judicial Commissioner, Upper Burma, with an Assistant Judicial Commissioner. There are seven Divisional and eight District Judges. There are also separate Provincial and Subordinate Judicial Services. Divisional Judges are also Sessions Judges. The Chief Court at Rangoon is the highest Civil Court of appeal and the highest court of Criminal appeal and revision in Lower Burma. It is also the High Court for the whole of Burma (including the Shan States) where European British subjects are concerned. It is the principal Civil and Criminal Court of original jurisdiction for Rangoon Town and hears appeals from all sentences of Courts and magistrates exercising jurisdiction in Rangoon Town.

In Criminal and Civil matters the Judicial Commissioner of Upper Burma exercises the power of a High Court for appeal, reference and revision, except in respect of criminal cases in which European British subjects are concerned.

All village headmen have limited magisterial powers and a considerable number are also invested with civil jurisdiction to a limited extent.

In pursuance of the policy of decentralization steps were taken in 1917 to restore to the village headmen the power and influence which they possessed in Burmese times before the

centralizing tendencies of British rule made them practically subordinate officers of the administration.

Municipalities.

The Rangoon Municipality is the most important, with an income of Rs. 50·62 lakhs and an expenditure of Rs. 43·95 lakhs. The Chairman is a member of the Indian Civil Service of Deputy Commissioner's rank. The members of the Committee are elected by wards.

There are 44 minor Municipalities, of which the most important are those at Mandalay and Moulmein. The average incidence of Municipal taxation is less than Rs. 3, but in Rangoon it reaches nearly Rs. 12.

Local Funds.

No Local Boards or District Boards exist in Burma. But in Lower Burma there are District Cess Funds, derived mostly from a 10 per cent. cess on collections of ordinary local revenue and from collections from markets, ferries, slaughter houses, etc. The total receipts exceeds Rs. 43 lakhs.

In Upper Burma there are District Funds. They are derived from market, ferry and license fees and occasional grants from Provincial revenues. The total revenue exceeds Rs. 12 lakhs.

There are 7 Cantonment Funds, 19 Town Funds and, excluding the Rangoon Port Trust, 6 Port Funds.

Finance.

In Burma, as in other Provinces, the finances are based on a "Provincial Settlement," which came into force on the 1st April 1907. The Government of India retains in the first place the entire profits of the commercial departments, such as Posts and Telegraphs, and in the second place, all the revenue where the 'locale' is no guide to its true incidence, such as the net receipts from Customs, Salt and Opium. But as the income from these sources is inadequate for the purpose of meeting the cost of the Imperial Services, special arrangements are made as with other Provinces for the division of the remaining sources of revenue between Imperial and Provincial Funds.

In 1910-1911, as a result of the Report of the Decentralisation Committee, modifications were introduced into the Settlement. Briefly, the Local Government retains 5-8ths of the net Land Revenue instead of a half, and the whole of the net forest revenue. Stamps, Excise and Income tax receipts are divided equally between Imperial and Provincial revenues. The unfairness of the Provincial settlement is disguised by the inclusion, under the head of Land revenue, of capitation taxes amounting to nearly a crore of rupees. This is a tax peculiar to Burma and should be entirely provincial. The injustice of the existing arrangement is redressed by contributions from Imperial revenues, which enable the Local Government to remain solvent (see below). But it is very unsatisfactory form of finance that robs a province of what are rightly its own revenues and remedies the injustice by means of doles.

The following figures show the gross revenue and expenditure for 1916-17 :—

	Receipts.	*Expenditure.*
	Rs.	Rs.
Imperial ..	429·29 lakhs	61·62 lakhs
Provincial ..	593·34 „	559·06 „
District Funds	55·22 „	56·62 „
Municipalities .	105·58 „	109·38 „
Other Funds ..	88·68 „	89·75 „

The Imperial Government makes a fixed annual assignment to the Burma Government. Under the settlement of 1911 this assignment was fixed at Rs. 12·90 lakhs. The total contributions from Imperial Funds during the year 1917-18 amounted to Rs. 46·93 lakhs. From April 1st, 1915, onwards the Government of India has allotted an additional recurring grant of Rs. 15·11 lakhs to the province, and has further guaranteed to the province a minimum aggregate of revenue advancing by Rs. 8 lakhs annually until 1923-24. No payments under this guarantee are to be made till after the war but it will have retrospective effect from the year 1911-12. The new financial arrangements proposed in the Montagu-Chelmsford scheme will no doubt upset all these agreements.

Public Works.

This Department is administered by two Chief Engineers who are also Secretaries to Government in the Public Works Department. There are eight Superintending Engineers (including one for Irrigation and a Sanitary Engineer), 83 Executive Engineers and Assistant Engineers. A Consulting Architect is attached to Head Quarters.

There are four Major Irrigation Works—Mandalay, Shwebo and Mon Canals and the Ye-U canal in the Shwebo District. These irrigate nearly 400,000 acres. Minor irrigation works maintained by the department supply water to another 400,000 acres, and a large area is supplied with water from minor works maintained by the villagers themselves. The area in lower Burma protected from floods and thrown open to cultivation by means of embankments is nearly 800,000 acres.

Police.

The Police Force is divided into Civil, Military and Rangoon Town Police. The first two are under the control of the Inspector-General of Police, the latter is under the orders of the Commissioner of Police, Rangoon, an officer of the rank of Deputy Inspector-General.

There are four other Deputy Inspectors-General, one each for the Eastern and Western Range, one for the Railway and Criminal Investigation Department and one for the Military Police.

The sanctioned strength of the Civil Police Force at the end of 1916 was 1,363 officers, and 14,378 men, but the numbers were 42 officers and 590 men short of the sanctioned strength. The strength of the Military Police on the 1st January 1917 was 16,693 officers and men. The Rangoon Town Police stand at 102 officers and 1,246 men.

A special feature of Burma is the Military Police. Its officers are deputed from the Indian Army. The rank and file are recruited from natives of India with a few Kachins, Karens and Shans. The experiment of recruiting Burmese on a small scale has been successful. The organisation is military, the force being divided into battalions. The object of the force is to supplement the regular troops in Burma. Their duties, apart from their military work is to provide escorts for specie, prisoners, etc. and guards for Treasuries, Jails and Courts. During the year 1916 the Military Police furnished 2,641 volunteers who were drafted into Indian regiments on active service, making 5,214 since war began. This number has been raised to over 7,000 in 1917.

Education.

At the head is the Director of Public Instruction with an Assistant Director. There are 5 Inspectors of Schools belonging to the Imperial and 3 belonging to the Provincial Service, and 7 Assistant Inspectors and one Assistant Inspectress belonging to the Provincial Service. The Rangoon College is staffed by a Principal and nine Professors drawn from the Imperial Service with three from the Provincial Service. Outside the Education Department is the Educational Syndicate, which holds certain examinations and serves as an advisory body on educational questions referred to it by Government. As system of Divisional Boards for the management of vernacular education is now in operation, and District Boards are under consideration.

Pending the establishment of the Burma University at the end of the war, the Rangoon College and the Baptist College are affiliated to the Calcutta University. Under Government there are—

An Arts College, Law School, Reformatory School, School of Engineering, Medical School, Veterinary Training School, Apprentice School, High School for Europeans, High School at Taunggyi for the sons of Shan Chiefs, 5 Normal Schools, 18 Anglo-Vernacular High Schools, and 19 Anglo-Vernacular Middle Schools.

Aided Schools, managed chiefly by Christian Missions, include 31 European Schools, 7 Normal Schools and 134 Anglo-Vernacular High and Middle Schools. The number of schools managed by Buddhist Societies is steadily increasing.

A remarkable feature of education in Burma is the system of elementary education evolved, generations ago, by the genius of the people. Nearly every village has a monastery (hpoongyi kyaung); every monastery is a village school and every Burman boy has, in accordance with his religion, to attend that school, shaving his head and for the time wearing the yellow robe. At the hpoongyi-kyaungs the boys are taught reading and writing and an elementary native system of arithmetic. The result is that there are very few boys in Burma who are not able to read and write and the literacy of Burman men is 412 per mille.

Of 9,000 Vernacular Schools registered under the grant in aid rules and subject to regular inspection more than one-third are Monastic Schools.

Another feature of education in Burma is the excellent work of the American Baptist Mission, which has established schools in most of the important towns in Burma, as well as a College in Rangoon.

The Imperial Idea Commission which sat in 1916-17 drew attention to the fact that considerably more than half the A. V. Schools in the province are controlled by Missions and nearly half by foreign agencies.

Medical.

The control of the Medical Department is vested in an Inspector-General of Civil Hospitals. Under him are 41 Civil Surgeons. There is also a Sanitary Commissioner, two Deputy Sanitary Commissioners, an Inspector-General of Prisons, three whole time Superintendents of Prisons, a Chemical Examiner and Bacteriologist and a Superintendent of the Lunatic Asylum.

A Civil Surgeon is in charge of each District, while at the summer Head Quarters of Maymyo there is a special Civil Surgeon.

The total number of Hospitals and Dispensaries was 282 at the end of March 1916. The Rangoon General Hospital is perhaps the finest in the East.

The Pasteur Institute was opened in Rangoon in July 1915. The Director is a senior member of the Indian Medical Service.

The total number of patients treated in 1916 was nearly 2 millions.

The expenditure on hospitals and dispensaries in 1916 was 18·73 lakhs, of which sum Rs. 60,800 only were subscriptions and donations.

Administration.

Lieutenant-Governor, Sir Reginald Craddock, K.C.S.I.

Private Secretary, Major W. L. Meade, I.A.

Aide-de-Camp, Lt. L. C. Graves.

Honorary Aide-de-Camp, Lt.-Col. J. L. W. French-Mullen, C.I.E.

Indian Aides-de-Camp, Hony. Capt. Muzaffar Khan, *Sardar Bahadur;* Hon. Capt. Amar Singh, *Rai Bahadur*. Subadar Maung Aung Bwin.

LEGISLATIVE COUNCIL OF THE LIEUTENANT-GOVERNOR.

Officials.

W. J. Keith.

Walter Francis Rice.

H. Thompson.

Charles M. Webb, I.C.S.

C. H. Wollaston.

Non-Officials.

Dr. Nasarwanji Nowroji Parakh.
Lim Chin Tsong.
Sir Sao Mawng, C.I.E.
Abdul Karim Abdul Shakur Jamal, C.I.E.
Francis Foster Goodliffe.
Maung Po Tha.
Dr. San Crombie Po, M.D.
E. O. Anderson.
J. E. Du Bern.
Maung Nyun.

SECRETARIAT.

Chief Secretary, W. F. Rice, C.S.I., I.C.S.
Revenue Secretary, W. J. Keith.
Secretary, P.W.D., C. H. Wollaston.
Officiating Joint Secretary, P. W. D., B. M. Samuelon, C.I.E.
Financial Commissioner, H. Thompson.
Senior Registrar, S. C. Buttery.

Miscellaneous Appointments.

Settlement Commissioner and Director of Land Records, R. E. V. Arbuthnot.
Director of Agriculture, Thomas Couper, M.A., I.C.S.
Consulting Architect, T. O. Foster, F.R.I.B.A.
Superintendent and Political Officer, Southern Shan States, G. C. B. Stirling.
Superintendent and Political Officer, Northern Shan States, H. A. Thornton.
Director of Public Instruction, J. M. S. Hunter, M.A.
Inspector-General of Police, Lt.-Col. H. Des Voeux.
Chief Conservator of Forests, C. G. Rogers.
Inspector-General of Civil Hospitals, Col. Percy Charles Hutchison Strickland.
Sanitary Commissioner, Lt.-Col. C. E. Williams.
Inspector-General of Prisons, Major H. H. G. Knapp.
Commissioner of Excise, Lieut.-Colonel T. L. Ormiston.
Accountant-General, A. M. Brigstocke, I.C.S.
Postmaster-General, G. W. Talbot.

Chief Commissioners of Burma.

Lieut.-Colonel A. P. Phayre, C.B. ..	1862
Colonel A. Fytche, C.S.I.	1867
Lieut.-Colonel R. D. Ardagh	1870
The Hon. Ashley Eden, C.S.I.	1871
A. R. Thompson, C.S.I.	1875
C. U. Aitchison, C.S.I.	1878
C. E. Bernard, C.S.I.	1880
C. H. T. Crosthwaite	1883
Sir C. E. Bernard, K.C.S.I.	1886
C. H. T. Crosthwaite, C.S.I.	1887
A. P. MacDonnell, C.S.I. (*a*)	1889
Alexander Mackenzie, C.S.I.	1890
D. M. Smeaton	1892
Sir F. W. R. Fryer, K.C.S.I.	1895

(*a*) Afterwards (by creation) Baron MacDonnell.

Lieutenant-Governors of Burma.

Sir F. W. R. Fryer, K.C.S.I.	1897
Sir H. S. Barnes, K.C.S.I., K.C.V.O. ..	1903
Sir H. T. White, K.C.I.E.	1905
Sir Harvey Adamson, Kt., K.C.S.I., LL.D.	1910
Sir Harcourt Butler, K.C.S.I., C.I.E. ..	1915
Sir Reginald Craddock	1917

Bihar and Orissa.

Bihar and Orissa lies between 19°-02′ and 27°-30′ N. latitude and between 82°-31′ and 88°-26′ E. longitude and includes the three provinces of Bihar, Orissa and Chota Nagpur, and is bounded on the north by Nepal and the Darjeeling district of Bengal; on the east by Bengal and the Bay of Bengal; on the south by the Bay of Bengal and Madras; and on the west by the United Provinces of Agra and Oudh and the Central Provinces.

The area of the British territories which constitute the Lieutenant-Governorship of Bihar and Orissa is 83,181 square miles inclusive of the area of large rivers. In addition to the districts which are directly under British rule, there are two groups of petty States which lie to the south and south-west of the Province and which under the names of the Tributary and Feudatory States of Orissa and the Political States of Chota Nagpur are governed each by its own Chief under the superintendence and with the advice of the Commissioner of the nearest British Administrative division assisted, in the case of the Orissa States, by a Political Agent. The area of these territories is 28,648 square miles and as it is usual to include them when speaking of Bihar and Orissa the area of the whole Province may be stated at 111,829 square miles. Two of the provinces of the Lieutenant-Governorship of Bihar and Orissa, *viz.*, Bihar and Orissa, consist of great river valleys, the third, Chota Nagpur, is a mountainous region which separates them from the Central Indian Plateau. Orissa embraces the rich deltas of the Mahanadi and the neighbouring rivers and is bounded by the Bay of Bengal on the south-east and walled in on the north-west by the hilly country of the Tributary States. Bihar lies on the north of the Province and comprises the valley of the Ganges from the spot where it issues from the territories of the Lieutenant-Governor of the United Provinces of Agra and Oudh till it enters Bengal near Rajmahal. Between Bihar and Orissa lies Chota Nagpur. Following the main geographical lines there are five Civil Divisions with head-quarters at Patna, Muzaffarpur (for Tirhut), Bhagalpur, Cuttack (for Orissa) and Ranchi (for Chota Nagpur).

The People.

The temporary head-quarters of Government are at Ranchi in Chota Nagpur, while the permanent Capital at Patna is nearing completion, the High Court, Government House and the Secretariat being already occupied. Various residences for the officials and quarters for the ministerial officers remain to be built. The new capital which lies between the Military Cantonment of Dinapore and the old civil station of Bankipore is known as "Patna", the old town being called Patna City." The Province has at present no hill station. Enquiries are being made and records taken at Netarhat, an extensive plateau elevation 3,700 feet, 90 miles over west of Ranchi, where climatic conditions closely resemble Pachmarhi.

The Province has a population of 38,435,293 persons which is very little less than that of France and rather more than that of the Bombay Presidency. The province is almost entirely rural, no fewer than 966 per mile of the population living in villages. Even so with 344 persons per square mile, Bihar and Orissa this more thickly populated than Germany. There are only three towns which can be classed as cities, namely, Patna, Gaya and Bhagalpur. During the last thirty years the population of Patna, the capital designate, has been steadily diminishing. Hindus form an overwhelming majority of the population. Though the Muhammadans form less than one-tenth of the total population they constitute more than one-fifth of urban population of the province. Animists account for 7 per cent. These are inhabitants of the Chota Nagpur plateau and the Santal Parganas, the latter district being a continuation of the plateau in a north-easterly direction.

Industries.*

The principal industry is agriculture, Bihar, more especially North Bihar, being the "Garden of India." Rice is the staple crop but the spring crops, wheat, barley, and the like are of considerable importance. It is estimated that the normal area cultivated with rice is 15,615,100 acres or 48 per cent. of the cropped area of the Province. Wheat is grown on 1,121,800 million acres, barley on 1,411,800 acres, maize or Indian-corn on 1,634,600 acres, the latter being an autumn crop. Oilseeds are an important crop, the cultivation having been stimulated by the demand for them in Europe. The exports in various kinds of oilseeds amounted in 1915-16 to 3,622,788 maunds valued at Rs. 1,68,96,484. It is estimated that 1,932,300 acres of land are annually cropped with oil-seeds in the Province. There is irrigation in Shahabad, Gaya, Champaran and Muzaffarpur districts in Bihar and in Balasore and Cuttack in Orissa. The Indigo industry had before the war been steadily on the decline, the total area sown having decreased from 342,000 acres in 1896 to 109,600 acres in 1911. The principal cause of this was the discovery of the possibilities of manufacturing synthetic or chemically prepared indigo on a commercial scale, a process chiefly carried out in Germany. Owing, however, to the stoppage of supplies from Germany the value of natural indigo has risen enormously and the area under cultivation has also risen from 38,500 to 80,600 acres and the total yield has increased from 8,181 factory maunds to 16,292. In the district of Purnea and in Orissa, and parts of the Tirhut Division jute is grown, but the acreage varies according to the price of jute. Thus in 1914-15 330,100 acres were under cultivation, in 1915-16 only 188,100. All the districts of Bihar, with the exception of Purnea, are liable to famine. The last serious famine was in 1895-96. In any year in which monsoon currents from either the Bay of Bengal or the Arabian Sea are unduly late in their arrival or cease abruptly before the middle of September the agricultural situation is very grave. It may

* The figures given in this paragraph relate to British territory only.

be said that for Bihar the most important rainfall is that known as the *hatia*, due towards the end of September or up to middle of October. Rain at this time not only contributes materially to an increased outturn of the rice crop, but also provides the moisture necessary for starting the spring or *rabi* crops.

Manufactures.

Opium was formerly, with indigo, the chief manufactured product of Bihar, but in consequence of the agreement with the Chinese Government the Patna factory has been closed. At Monghyr the Peninsular Tobacco Company have erected one of the largest cigarette factories in the world and as a result tobacco is being grown much more extensively. There are two important iron works in the Singhbhum District. Messrs. Tata & Co.'s Iron and Steel Works at Sakchi and the Bengal Iron and Steel Company at Dhulia. The net profit of the Tata Iron Works showed a remarkable rise from Rs. 24 lakhs to Rs. 68 lakhs for the year ending June 30th 1916. Both these works possess considerable economic possibilities and are likely to have a far reaching effect on the iron and steel trade of India in the future. The Cape Copper Co. are also opening up copper mines at the Rakha Hills in the same district. The amount of Copper Ore extracted in 1915-16 was 8,010 tons. But by far the most important of the mineral industries in the province is that concerned in the raising of coal. The coalfields in the Manbhum District have undergone an extraordinary development in the past twenty years. The importance of the industry may be said to date from the opening of the railway from Barakar to Dhanbad and Katras in 1894. In 1894 the outturn of all the mines in the district was only 126,686 tons; in 1895 it rose to 1,281,294 tons, the enormous increase being almost entirely from the Jharia field. In the two succeeding years there was a set back, but from 1898 there was a steady rise in the outturn which first touched two million tons in 1901. In 1905 the outturn had swelled to nearly three million ton and in 1906 to nearly four millions; in 1907 over 5,800,000 tons were raised and in the following year no less than seven million tons. By 1914-15 the production of Indian coal had been raised to 16,464,000 tons valued at Rs. 586 lakhs. Of this total 56 per cent. was raised in the Jharia fields and 30 per cent. from the Raniganj coal fields of Bengal. The entrance of the Bengal-Nagpur Railway into the Jharia field in 1904, and the subsequent extension of various small loops and branches, besides innumerable sidings from both systems, the doubling of the line from Barakar to Dhanbad and the opening of the section of the Grand Chord of the East Indian Railway from Dhanbad to Gomoh have all contributed to this rapid development. Giridih in Hazaribagh is also the centre of a considerable coal-mining industry containing, as it does, mines owned and worked by the East Indian Railway Company. The Bokaro-Ramgarh field in the same district is likely to be of great economic importance as soon as the area is fully opened up by the railway now under construction. It immediately adjoins the Jharia field across the Hazaribagh border. There is a large undeveloped coal supply, it is believed, in the Districts of Palamau and Hazaribagh. There are now 354 coal mines in this Province with an output of 10,11,356 tons. The war has demonstrated the great value of the mica mines in Hazaribagh and Gaya which are now entirely controlled by Government and the output from which has considerably increased under the management of an officer deputed from the Geological Department.

Administration.

The Province is administered by a Lieutenant Governor in Council. The Lieutenant-Governor is appointed by the Crown and is a senior member of the Indian Civil Service. He is assisted by a Council of three members, two of whom are drawn from the Indian Civil Service, while the third, in practice, is an Indian. Each member takes charge of certain departments and in the event of any difference of opinion regarding inter-departmental references the matter is decided in Council. In practice all important cases are submitted through the member concerned to the Lieutenant-Governor.

The unit of executive administration is the District. The District Officer is styled District Magistrate and Collector, except in the Scheduled districts where he is known as the Deputy Commissioner. The ordinary district jails are placed in charge of a Superintendent, usually the Civil Surgeon, while the Magistrate pays periodical visits of inspection. All District Officers are *ex-officio* Registrars; and as *ex-officio* Chairmen of the District Boards they have control over primary education and are charged with the execution and administration of all local public works. In a word, the District Officer is the executive chief and administrator of the tract of country committed to him. As District Magistrate he is also local head of the magistracy and, as such, competent to try all cases, except the more important which are sent for trial at the Sessions, but except in the Scheduled districts he seldom presides in Court, and his share in this part of the administration is practically confined to the distribution of work, the hearing of petty appeals and the general superintendence of his subordinates. The latter combine revenue with magisterial functions and as Deputy Collectors exercise under his control many of the powers of a Collector. The police, by whose aid he carries on the criminal administration, have as their local superior a Superintendent, who in all matters, except those concerning the discipline and internal economy of the force, has to carry out such instructions as he receives from the District Magistrate. The Sub-divisional Officers, who are Joint, Assistant and Deputy Magistrates in charge of portions of districts, occupy, to a great extent, in their own jurisdictions, the position of the District Officer, except in respect of the police, over whom they have only judicial and no executive control. There are 21 Districts.

Above the District Magistrates are the Divisional Commissioners. Their duties are principally those of supervision. In almost all matters they exercise a general superintendence, and especially in the Revenue Department they control the Collectors' proceedings. Commissioners are the channels of communication between the local officers and Government,

sifting, collating and bringing together in a compact form the information they receive. In revenue cases the Commissioner forms a Court of appeal and in this and similar matters is subject to the orders of the Board of Revenue. With this exception he is in subordination to Government direct.

The Civil Secretariat consists of the Chief Secretary, who is in charge of the Political, Appointment and Education Departments; the Revenue and Judicial Secretary, the Financial and Municipal Secretary and their three Under Secretaries.

Finance.

The Province of Bihar and Orissa was formed with five divisions, detached from the old province of Bengal with effect from the 1st April 1912. The old arrangements made with the Government of Bengal regarding the financial administration of the Province therefore ceased to apply from that date. A fresh arrangement has, however, been made, with the approval of the Secretary of State. As the method adopted was in some measure tentative and provisional, a temporary settlement for a period of three years only has been effected. Owing to the war it has been found necessary to continue the provisional settlement for the present. Under the terms of this settlement the whole of the receipts under the heads of Interest, Forest, Registration, Courts of Law, Jails, Police, Ports and Pilotage, Education, Medical and superannuation receipts have been made over entirely to the local Government together with their corresponding charges. In addition to these, it receives three-fourths of the receipts from excise, the whole of the Land Revenue collected from Government Estates, one-half of the receipts under all other sub-heads excepting recoveries from zamindars and raiyats on account of survey and settlement in Bihar and other similar special surveys and the whole of the receipts under Scientific and other Minor Departments.

The only expanding items of revenue are Excise and Stamps. The Provincial Budget for 1918-19 shows an opening balance of Rs. 1,39,13,000. Receipts Rs. 3,47,97,000, Expenditure Rs. 3,67,16,000, Closing Balance Rs. 1,19,94,000. The reduction in the balance is primarily due to the construction of the new capital at Patna.

Public Works.

The Public Works Department in the Province of Bihar and Orissa consists of two branches, *viz.*:—(1) Roads and Buildings, and (2) Irrigation and Marine, which also deals with railways. Each branch has a Chief Engineer, who is also Secretary to the Local Government with an Engineer Officer as Under Secretary under him. There is also a non-professional Assistant Secretary, a Consulting Architect and a Sanitary Engineer, who works under a Sanitary Board. The electrical work of the Province is carried out by an Electrical Inspector and a staff of subordinates.

The Roads and Buildings Branch consists of two Circles in charge of two Superintending Engineers who control the Public Works Divisions held by the Executive Engineers for the execution of Imperial and Provincial works. The Superintending Engineers are also the Inspectors of Works under the Local Self-Government Act in respect of all local works of the District Boards and, in this capacity, are the professional advisers of the Chairmen and of the Divisional Commissioners who control the operation of the Boards. They also supervise all works carried out by the District Boards.

The Irrigation branch is composed of three Circles, each of which is in charge of a Superintending Engineer. In the Irrigation Circles, the Executive Engineers carry out the works of the Roads and Buildings Branch, within the limits of their divisions, in addition to their irrigation duties. The Superintending Engineers of Irrigation Circles also act as Inspectors of Works in regard to local works in the districts in their Circles. In the Sone and Orissa Circles there are two Revenue Divisions under Deputy Collectors who deal with the assessment and collection of water rates on the Orissa and Sone Canals under the control of the Superintending Engineers.

Justice.

The administration of justice is controlled by the High Court of Judicature recently established at Patna. In the administration of civil justice below the High Court are the District Judges as Courts of Appeal, the Subordinate Judges and the Munsiffs. The jurisdiction of a District Judge or Subordinate Judge extends to all original suits cognizable by the Civil Courts. It does not, however, include the powers of a Small Cause Court, unless these be specially conferred. The ordinary jurisdiction of a Munsif extends to all suits in which the amount or value of the subject matter in dispute does not exceed Rs. 1,000 though the limit may be extended to Rs. 2,000. On the criminal side the Sessions Judge hears appeals from Magistrates exercising first class powers while the District Magistrate is the appellate authority for Magistrates exercising second and third class powers. The District Magistrate can also be, though in point of fact he very rarely is, a court of first instance. It is usual in most districts for a Joint Magistrate or a Deputy Magistrate to receive complaints and police reports, cases of difficulty or importance being referred to the District Magistrate who is responsible for the peace of the district. In the non-regulation districts the Deputy Commissioner and his subordinates exercise civil powers and hear rent suits.

Local Self-Government.

Bengal Act III of 1884, which regulates the constitution, powers and proceedings of Municipal bodies in this Province has been amended by the Bengal Acts IV of 1894 and II of 1896. By these enactments the elective franchise has been further extended, and now provides for the establishment and maintenance of veterinary institutions and the training of the requisite staff, the improvement of breeds of cattle, the training and employment of female medical practitioners, the promotion of physical culture, and the establishment and maintenance of free libraries. The Commissioners may order a survey and organise a fire brigade, they may control the water-supply when its purity is

suspected, even to the extent of interference with private rights, larger powers of precaution are conferred in the case of ruined and dangerous houses and other erections, as well as increased optional powers for the general regulation of new buildings.

The total number of Municipalities at present in existence is 55. The ratepayers of 49 Municipalities have been granted the privilege of electing two-thirds of the number of Commissioners fixed in each case, whilst in 34 cases the Commissioners are authorised to elect their own Chairman. In the remaining towns Government has reserved to itself the power of appointing the Commissioners or Chairman, as the case may be, owing either to the backwardness of the place or to the necessity for holding the balance against contending interests or strong party feeling. It is only in 4 towns, however, that Government exercises complete control in the appointment of both Commissioners and Chairmen.

The total receipts of Municipalities including grants from the Local Government and the opening balance Rs. 10,63,763, total in 1916-17 Rs. 45,56,542 and the disbursements 4Rs.5,11,420, leaving a closing balance of Rs. 10,45,112, a large portion of which is earmarked for improvements in the Patna City Municipality.

Apart from Municipalities, each district with the exception of the Santal Parganas, Angul and Singhbhum has a District Board constituted under Bengal Act III of 1885. Municipal areas are excluded in accordance with the provisions of section 1. Local Boards have been formed in all of these districts where there are sub-divisions, except Ranchi. There are at present 18 District Boards, 45 Local Boards, and 23 Union Committees in the Province.

In accordance with the provisions of section 7 of the Act, a District Board is to consist of not less than 9 members. Local Boards are entitled to elect such proportion (as a rule one-half) of the whole of the District Board as the Lieutenant-Governor may direct. In districts where there are no Local Boards, the whole of the members are appointed by Government. The Chairman of the District Board is appointed by Government; he is in practice always the Magistrate of the district.

Owing to the surrender by the Government of the Public works cess to the District Boards the latter are now wealthy local bodies, the total income being nearly 87 lakhs, of which 15 lakhs were spent on education and over 6 lakhs on medical relief and sanitation. Nearly fifty lakhs were spent in 1916-17 on civil works under District Boards.

Land Tenures.

Estates in the Province of Bihar and Orissa are of three kinds, namely, those permanently settled from 1793 which are to be found in the Patna, Tirhut and Bhagalpur divisions, those temporarily settled as in Chota Nagpur and parts of Orissa, and estates held direct by Government as proprietor or managed by the Court of Wards. The passing of the Bengal Tenancy Act (VIII of 1885) safeguarded the rights of the cultivators under the Permanent Settlement Act. Further, the Settlement Department under the supervision of the Director of Land Records makes periodical survey and settlement operations in the various districts, both permanently and temporarily settled. In the former, the rights of the undertenants are recorded and ascertained, while in the latter there is the re-settlement of rents. In the re-settlement proceedings rents are fixed not only for the landlords but also for all the tenants. A settlement can be ordered by Government on application made by raiyats.

The tenures of Orissa are somewhat different. Under the zamindars, that is, the proprietors who took settlement from Government and pay revenue to Government direct, is a class of subordinate proprietors or proprietary tenure-holders, who were originally village headmen dealing more or less direct with the revenue authorities. They have a variety of names such as *mukadam*, *padhan*, *maurusi*, *sarbaraka*, *pursetha*, *khuriddar* and *shikmi* zamindars. These sub-proprietors or proprietary tenure-holders pay their revenue through the zamindars of the estates within which their lands lie. In Chota Nagpur, Orissa and the Santal Parganas, the rights of village headmen have been recognised. The headman collects the rent and is responsible for them minus a deduction as remuneration for his trouble.

Both Orissa and Chota Nagpur have their own Tenancy Acts.

Police.

The Departments of Police, Prisons and Registration are each under the general direction of Government, supervised and inspected by an Inspector-General with a staff of assistants. The Commissioner of Excise and Salt is also Inspector-General of Registration.

Under the Inspector-General of Police are three Deputy Inspectors-General and 27 Superintendents. There are also 27 Assistant Superintendents of Police and 15 Deputy Superintendents. The force is divided into the District Police, the Railway Police and the Military Police. A Criminal Investigation Department has also been formed for the collection and distribution of information relating to professional criminals and criminal tribes whose operations extend beyond a single district and to control, advise, and assist in investigations of crime of this class and other serious cases in which its assistance may be invoked. There are two companies of Military Police which are maintained as reserves to deal with serious and organised disturbances and perform no ordinary civil duties. The work of the Railway Police is practically confined to offences actually committed on the railways, but they are under the control of the Deputy Inspector-General of the Criminal Investigation Department, and an important part of their duties is to co-operate with the District Police in watching the movements of bad characters by rail. The prevention and detection of crime in the Province generally is entrusted to the District Police. In that work they are assisted by the rural police, known as chaukidars and dafadars, who form no part of the regular force but are under a statutory obligation to report

all cognizable crime at the police station, and generally to assist in the prevention and detection of crime. They are not whole-time servants of Government, but they are paid a small monthly salary which is realized from the villagers by the panchayat. The cost of the police is estimated at Rs. 54½ lakhs for the year 1918-19.

Education.*

The Department of Public Instruction is controlled by a Director. There are 6 Divisional Inspectors of Schools, of whom one inspects European Schools in addition to his other duties, 5 Assistant Inspectors, 5 Special Officers for Muhammadan Education, 26 Deputy Inspectors, 194 Sub-Inspectors, 30 Assistant Sub-Inspectors and 158 Inspecting Pandits.

A University has recently been established at Patna.

There are 7 Arts Colleges with 2,415 students and one Training College for 32 students, which with the Patna College, the Ravenshaw College at Cuttack and the Greer Bhumihar Brahman College at Muzaffarpur is maintained by Government. The College at Bhagalpur, the Bihar National College at Bankipore and the Dublin University Mission College at Hazaribagh are aided by Government. There are 97 High Schools, 94 for boys and 3 for girls with 32,392 and 325 pupils, respectively. Of these the most important are the Zilla Schools, maintained by Government at the headquarters of each district, and the Government Schools for girls at Cuttack and Bankipore, but 44 schools for boys and 1 for girls also receive aid from provincial revenues. Most of the schools of status lower than High Schools are managed by local bodies such as District Boards. Among these are 234 Middle English Schools with 23,625 pupils, 135 Middle Vernacular Schools with 11,936 pupils, and 23,402 Primary Schools with 6,43,117 pupils. Of the primary schools 17,876 are maintained or aided by public funds. For training vernacular teachers there are 5 first grade training schools, 107 smaller schools for training *gurus* or village school masters and 7 training schools for mistresses. Other special institutions include 36 technical and industrial schools, 4 commercial schools and 15 *Madrasas* where Persian and Arabic are the chief subjects of study. The expenditure on public instruction from provincial funds in 1916-17 was Rs. 81,52,080.

Contributed as follows:—

	Rs.
Provincial Revenue ..	28,71,832
District Funds	15,73,599
Municipal Funds	1,72,748
Fees	21,78,696
Other Sources	11,42,442
Total ..	79,39,317

Spent on Indian education, to which may be added Rs. 2,12,763 spent on European Schools.

Medical.

The Medical Department is under the control of the Inspector-General of Civil Hospitals who is a Member of the Indian Medical Service. Under him there are 20 Civil Surgeons who are responsible for the medical work of the districts at the head-quarters of which they are stationed. 57 Dispensaries are maintained by Government—

Public	19
Special Police	24
Canal	5
Others	9
Total ..	57

Besides these there are 330 Dispensaries maintained by Local bodies, Railways, private persons, etc. 3,463,145 patients including 50,625 in-patients in public dispensaries were treated.

The total income of the medical institutions amounted to Rs. 16,69,916. A large asylum for Europeans has been opened at Ranchi which receives patients from Northern India. A similar institution is under construction for the Indians. At present these are treated at Patna.

There are 8 institutions for the treatment of lepers, the number treated being 1,337 and the total expenditure Rs. 87,207, of which Government contributed 26 per cent. A new leper asylum is under construction at Cuttack.

The Sanitary Department is in charge of the Sanitary Commissioner who is directly subordinate to Government as its expert adviser in regard to sanitation. There are three Deputy Sanitary Commissioners who work under the control of the Sanitary Commissioner. Vaccination is carried out by a staff under the direction of the Sanitary Commissioner. There is also a Sanitary Engineer

The expenses on sanitation was Rs. 15,18,554 by Municipalities and Rs. 4,32,028 by District Boards.

Administration.

Lieutenant-Governor, Sir Edward Gait, K.C.S.I., C.I.E. Assumed charge of office, 19th November 1915.

PERSONAL STAFF.

Private Secretary, J. C. B. Drake, I.C.S.

Aide-de-Camp, W. S. Hitchcock.

Honorary Aides-de-Camp, Hon. Capt. Sardar Bahadur Hira Singh, Subadar Major Sita Ram Singh, Major A. T. Peppe and Major J. A. M. Wilson.

EXECUTIVE COUNCIL.

Havilland Le Mesurier, C.S.I., C.I.E., I.C.S.

Saiyid Sharf-ud-din.

Walter Maude, C.S.I.

Sir Saiyed Ali Imam, K.C.S.I., Tempy. Member.

* The figures given in this paragraph relate to British territory only.

LEGISLATIVE COUNCIL.

President, The Lieutenant-Governor.

Ex-Officio.

The Members of the Executive Council.

NOMINATED.

Officials.

C. E A. William Oldham.
J. G. Jennings.
J. F. Grunning.
Hugh McPherson.
Blanchard Foley.
Lt.-Col. J. C. S. Vaughan.
Stoner Forrest.
F. Clayton.
E. G. Stanley.
Edward Lister, C.I.E.
James David Sifton, I.C.S.
Robert Thomas Dundas, C.I.E.
T. S. Macpherson.
Donald Weston.
Col. G. J. Hamilton Bell.

Non-Officials.

Maharaja Bahadur Sir Ravaneswar Prasad Singh, K.C.I.E.
Rai Bahadur Nishi Kanta Sen.
Madhu Sudan Das, C.I.E.
Rev. A. Campbell, D.D.

ELECTED.

Raja Harihar Parshad Narayan Singh.
Babu Maheshwar Prashad.
Kirtyanand Singh.
Babu Ganesh Lal Pandit.
Kumar Thakurai G. Prasad Singh.
Julian Veitch Jameson.
Moulvi Saiyid Nurul Hasan.
Saiyid Ahmad Husain.
Robert Middleton Watson Smyth.
Saiyid Muhammad Naim.
Khwaja Muhammad Nur.
Bishun Prasad.
Dwarka Nath Rai Bahadur.
Lachmi Prasad Sinha.
Braja Sundar Das.
Sharat Chandra Sen.
Purnendu Narayan Singh.
Adit Prashad Singh.
Kumar Shevanandan Prasad Singh.
Babu Gopabandhu Das.
Shyam Krishna Sahay.

SECRETARIAT.

Chief Secretary to Government, Political, Appointment, and Educational Departments, McPherson.

Secretary to Government, Financial and Municipal Departments, J. D. Sifton.

Secretary to Government, Revenue Department, E. Lister, C.I.E.

Secretary to Government (P. W. D.), Irrigation Branch, F. Clayton.

Buildings and Roads Branch, E. G. Stanley.

BOARD OF REVENUE.

Member, E. H. C. Walsh.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, The Hon. Mr Sharp, M.A., C.I.E.

Inspector-General of Police, R. T. Dundas.

Conservator of Forests, H. H. Haines.

Inspector-General of Civil Hospitals, Col. G. H. Bell.

Sanitary Commissioner, Major William Charles Ross.

Inspector-General of Prisons, Lt.-Col. Raja Jiwan Singh, C.I.E., I.M.S.

Accountant-General, V. C. Scott O'Connor.

Director of Agriculture, G. Milne.

The Central Provinces and Berar.

The Central Provinces and Berar compose a great triangle of country midway between Bombay and Bengal. Their area is 130,991 miles, of which 82,000 are British territory proper and the remainder held by Feudatory Chiefs. The population (1911) is 13,916,308 under British administration and 2,117,002 in the Feudatory States. Various parts of the Central Provinces passed under British control at different times in the wars and tumult in the first half of the 19th century and the several parts were amalgamated after the Mutiny, in 1861, into the Chief Commissionership of the Central Provinces. Berar was, in 1853, assigned to the East India Company as part of a financial arrangement with the Nizam and was transferred to the Central Provinces in 1903, as the result of a fresh agreement with the Nizam.

The Country.

The Central Provinces may roughly be divided into three tracts of upland, with two intervening ones of plain country. In the north-west, the Vindhyan plateau is broken country, covered with poor and stunted forest. Below its precipitous southern slopes stretches the rich wheat growing country of the Nerbudda valley. Then comes the high Satpura plateau, characterised by forest-covered hills and deep water-cut ravines. Its hills decline into the Nagpur plain, whose broad stretches of shallow black cotton soil make it one of the more important cotton tracts of India and the wealthiest part of the C. P. The Eastern half of the plain lies in the valley of the Wainganga and is mainly a rice growing country. Its numerous irrigation tanks have given it the name of the "lake country" of Nagpur. Further east is the far-reaching rice country of Chattisgarh, in the Mahanadi basin. The south-east of the C. P. is again mountainous, containing 24,000 square miles of forest and precipitous ravines, and mostly inhabited by jungle tribes. The Feudatory States of Bastar and Kankar lie in this region. Berar lies to the south-west of the C. P. and its chief characteristic is its rich black cotton-soil plains.

The People.

The population of the province is a comparatively new community. Before the advent of the Aryans, the whole of it was peopled by the Gonds and these aboriginal inhabitants fared better from the Aryans than their like in most parts of India because of the rugged nature of their home. But successive waves of immigration flowed into the province from all sides. The early inhabitants were driven into the inaccessible forests and hills, where they now instituted a large portion of the tribes in those parts, who form a quarter of the whole population of the C. P. The Gonds are still found in large numbers in all parts of the province, but they are partially concentrated in the south-east. The main divisions of the new comers are indicated by the language divisions of the province. Hindi, brought in by the Hindustani-speaking peoples of the North, prevails in the North and East; Marathi in Berar and the west and centre of the C. P. Hindi is spoken by 56 per cent. of the population and is the *lingua franca*. Marathi by 31 per cent. and in Berar, and Gondi by 7 per cent. The effects of invasion are curiously illustrated in Berar, where numbers of Moslems have Hindu names, being descendants of former Hindu officials who on the Mahomedan invasion adopted Islam rather than lose their positions. The recent census shows that a gradual Brahmanising of the aboriginal tribes is going on. The tribes are not regarded as impure by the Hindus and the process of absorption is more or less civilising.

Industries.

When Sir Richard Temple became first Chief Commissioner of the C. P. the province was land-locked. The only road was that leading in from Jubbulpore to Nagpur. The British administration has made roads in all directions, the two trunk railways between Bombay and Calcutta run across the province and in the last few years a great impetus has been given to the construction of subsidiary lines. These developments have caused a steady growth of trade and have aroused vigorous progress in every department of life. The prime industry is, of course, agriculture, which is assisted by one of the most admirable agricultural departments in India and is now receiving additional strength by a phenomenal growth of the co-operative credit movement. The land tenure is chiefly on the zemindari, or great landlord system, ranging, with numerous variations, from the great Feudatory chiefships, which are on this basis, to holdings of small dimensions. A system of land legislation has gradually been built up to protect the individual cultivator. Berar is settled on the Bombay ryotwari system. Thirty-eight per cent. or about 44,000 square miles of the C. P. is forest: in Berar the forest area is 3,941 square miles. The rugged nature of the greater part of the country makes forest conservation difficult and costly. Excluding forest and wastes, 57 per cent. of the total land is occupied for cultivation; in the most advanced districts the proportion is 80 per cent.; and in Berar the figure is also high. The cultivated area is extending continuously except for the temporary checks caused by bad seasons. Rice is the most important crop of the C. P., covering a quarter of the cropped area. Wheat comes next, with 15¼ per cent., then pulses and cereals used for food and oil seeds, with 11 per cent. and cotton with 7 per cent. In Berar cotton occupies nearly 40 per cent. of the cropped area, jowar covers an equal extent, then wheat and oil seeds. In agriculture more than half the working population is female.

Commerce and Manufactures.

Industrial life is only in its earliest development except in one or two centres, where the introduction of modern enterprise along the railway routes has laid the foundations for great future developments of the natural wealth of the province. Nagpur is the chief centre of

a busy cotton spinning industry. The Empress Mills, owned by Parsi manufacturers, were opened there in 1877 and the general prosperity of the cotton trade has led to the addition of many mills here and in other parts of the province. The total output of spun yarn now amounts to approximately 50 million yards a year.

The largest numbers engaged in any of the modern industrial concerns are employed in manganese mining. Then follow coal mining, the Jubbulpore marble quarries and allied works, the limestone quarries, and the mines for pottery clay, soapstone, &c.

The total number of factories of all kinds legally so described was 458 in 1917, the latest period for which returns are available and the number of people employed in them 47,793 The same economic influences which are operative in every progressive country during its transition stage are at work in the C. P. and Berar, gradually sapping the strength of the old village industries, as communications improve, and concentrating industries in the towns. While the village industries are fading away, a large development of trade has taken place. The last pre-war reports showed an increase in volume by one-third in eight years In 1914 for the first time statistics for the Berar factories were incorporated with those of the C. P.

Administration.

The administration of the Central Provinces and Berar is conducted by a Chief Commissioner, who is the controlling revenue and executive authority and is appointed by the Governor-General-in-Council. He is assisted by three secretaries, two under-secretaries and an assistant secretary. Simultaneously with the jubilee of the foundation of the Province in 1913 a Legislative Council was constituted. It consists of 24 members, excluding the Chief Commissioner, 7 being elected by Municipalities, District Councils and Landholders in the C. P. and 17 nominated by the Chief Commissioner, of whom not more than 10 may be officials and 3 shall be non-officials chosen respectively by the municipalities, District Boards and Landholders of Berar. The Chief Commissioner may nominate an additional member, official or non-official, who has special knowledge of a subject on which legislation is pending. The C. P. are divided for administrative purposes into four divisions, and Berar constitutes another division. Each of these is controlled by a Commissioner. Berar is divided into four districts, three other divisions into five districts each and one into three, and these are controlled by Deputy-Commissioners, immediately subordinate to the Commissioners. The principal heads of Provincial departments are the Commissioner of Settlements and Director of Land Records, the Inspector-General of Civil Hospitals and Sanitary Commissioner, the Inspector-General of Police, the Inspector-General of Prisons, the Director of Public Instruction, the Commissioner of Excise, the Inspector-General of Registration, Assessed taxes, &c., and the Director of Agriculture and Director of Industries. The Deputy-Commissioners of districts are the chief revenue authorities and District Magistrates, and they exercise the usual powers and functions of a district officer. The district forests are managed by a forest officer, usually a member of the Imperial Forest Service, over whom the Deputy-Commissioner has certain powers of supervision, particularly in matters affecting the welfare of the people. Each district has a Civil Surgeon, who is generally also Superintendent of the District Jail and whose work is also in various respects supervised by the Deputy-Commissioner. The Deputy-Commissioner is also marriage registrar and manages the estates of his district which are under the Court of Wards. In his revenue and criminal work the Deputy-Commissioner is assisted by (a) one or more Assistant Commissioners, or members of the Indian Civil Service; (b) one or more Extra-Assistant Commissioners, or members of the Provincial Civil Service, usually natives of India, but including a few Europeans and Eurasians; and (c) by tahsildars and naibtahsildars, or members of the Subordinate service, who are nearly always natives of India. The district is divided for administrative purposes into tahsils, the average area of which is 1,500 square miles. In each village a lambardar, or representative of the proprietary body, is executive headman.

Justice

The Court of the Judicial Commissioner is the highest court of appeal in Civil cases, and also the highest Court of criminal appeal and revision for the Central Provinces and Berar except in reference to proceedings against European British subjects and persons jointly charged with European British subjects: in such cases the High Court of the N. W. P. and the High Court of the Bombay have jurisdiction over different parts of the Provinces.

The Court sits at Nagpur and consists of a Judicial Commissioner (who is appointed by the Governor-General in Council) and 3 Additional Judicial Commissioners of whom one at least must be an advocate of the Court or a Barrister or pleader of not less than 10 years' standing.

Subordinate to the Judicial Commissioner's Court are the District and Sessions Judges (11 in number) each of whom exercises civil and criminal jurisdiction in a Civil and Sessions district comprising one or more Revenue districts. The civil staff below the District and Sessions Judge consists of Sub-Judges and Munsiffs.

Local Government.

Municipal administration was first introduced under the Punjab Municipal Acts and the Municipality of Nagpur dates from 1864. Several revising Acts extend its scope. Viewed generally, municipal self-government is considered to have taken root successfully. The general basis of the scheme is the Local Board for each tahsil and the District Council for each district. In Berar these bodies are called Local Boards and District Boards. The larger towns have municipalities.

A certain proportion of the Local Board members are village headmen, elected by their own class, others are elected representatives of the mercantile and trading classes and a third proportion, not exceeding $\frac{1}{4}$ of the whole, are nominated by Government. The constitution of the District Councils is similar.

The District Councils have no power of taxation and Local Boards derive their funds in allotments from the District Councils.

The officers of the District Councils are frequently non-officials, but it is generally found convenient that the Tahsildar and Naib Tahsildar should be Chairman and Secretary of the Local Boards.

Rural education and sanitation are among the primary objects to which these bodies direct their attention and expenditure on famine relief is in the first instance a charge upon the District Council funds.

Finance.

The main sources of Government income in the province has always been the land revenue, but under Mahratta rule many petty imposts were added in all branches of trade and industry and life in general. Thus there was a special tax on the marriage of Banias and a tax of a fourth of the proceeds of the sale of houses. The scheme of Provincial finance was introduced in 1871-72. Special settlements under this system have been necessitated in view of the special circumstances of the province and the recurrence of famine, which a few years ago caused a severe economic strain upon the province. The wave of prosperity which has spread over the country in the past 14 years, since the end of the previous period, has more than trebled the funds available for the administration, compared with what they were before the several years of scarcity, and the progress of the administration and of expenditure has increased correspondingly, without any increase of taxation under provincial heads.

Public Works.

The Public Works Department is controlled by a Chief Engineer, who is also Secretary to the Chief Commissioner. There are two Superintending Engineers for roads and buildings and a third in charge of irrigation. In 1892 a separate division of the Public Works Department was formed for the construction of roads and buildings in the Feudatory States. The expansion of the department and its work has been one of the most remarkable features of the administration in the past decade and a half, largely owing to the demands of a progressive age in regard to communications and new buildings. The Irrigation Branch of the P. W. D. represents a completely new departure. It was formerly the accepted view that the irregular surface of the country would make irrigation canals impossible and that the S. W. monsoon was so regular that it would pay better to relieve famine than to prevent it. Both conclusions have been reversed. Picked officers investigated projects for irrigation when the Irrigation Commission was appointed 1901) and canal and storage works have ince been advanced with vigour. The Tandula, Wainganga and Mahanadi canal projects are mongst the more important schemes.

Police.

The police force was constituted in its present asis on the formation of the Provinces, the hole of which, including the Cantonments and he Municipalities, is under one force. The trength is equal to one man per 8 square miles f area. The superior officers comprise an Inspector-General, whose jurisdiction extends over Berar, three Deputy Inspectors-General, for assistance in the administrative control and supervision of the Police force, including the Criminal Investigation Department, and the usual cadre of District Superintendents of Police, Assistant and Deputy Superintndents and subordinate officers. On three railways special Railway Police are employed. A Special Reserve of 486 men is distributed over the head-quarters of seven districts, for use in dealing with armed disturbers of the peace in whatever quarter they may appear. The men in this reserve are regularly drilled and are armed with rifles. There is a small force of Mounted Police. The Central Provinces has no rural police as the term is understood in other parts of India. The village watchman is the subordinate of the village headman and not a police official and it is considered very desirable to maintain his position in this respect.

Education.

The educational department was constituted in 1862 and the scheme then drawn up has remained the basis of the system of public education to the present day. The leading principles are that the department should content itself with the direct management of colleges and higher secondary schools, the training of teachers and inspection in work in rural areas. The maintenance of rural schools should as far as possible be left to the local authorities, every encouragement should be given to private philanthropy and no Government schools should be founded where there existed a sufficient number of institutions capable, with the assistance of the State, of supplying the local demand for instruction. At the head of the Department is the Director of Public Instruction, who has a staff of Inspectors and Inspectresses for girls schools. All these appointments are included in the Indian Educational Service. An Agency Inspector supervises the schools of the Feudatory States. The province has five colleges: the Robertson and Training Colleges at Jubbulpore, and the Morris and Hislop Colleges and the Victoria College of Science at Nagpur. The Agricultural Department maintains an Agricultural College at Nagpur. The Colleges are affiliated to Allahabad University, but a demand has arisen for a local University.

After much preliminary discussion, a committee was appointed in July, 1914, to frame a scheme "which shall provide for a University of the teaching type at Nagpur, or in its immediate neighbourhood, and for the affiliation to this central institution of colleges situated in other places in the C. P. and Berar." The committee in their report, issued in 1915, proposed a University presenting some of the features of an affiliating University but possessed of functions and endowed with responsibilities which transcend the scope of those universities in India which conform to that type. "For (says the report) it will not only be an examining but a teaching university, and its teaching activities will not be limited to the provision of courses of instruction for postgraduate degrees, but will embrace several departments of study

in the lower courses. The main difference, however, between the university which we propose and existing universities will lie in the closer relations of the former with its constituent colleges. According to our scheme, the University will exercise an effective control over the teaching and discipline of all the institutions which come within its jurisdiction. For it is only by exercising control over its component parts that the Universities can maintain a high standard of moral and intellectual endeavour, and create traditions which will make themselves felt in the development of the Provinces as a whole."

The committee said: "The University which we propose will possess powers which will entitle it to a high place in the administrative machinery of the Provinces. But administrative autonomy involves a certain measure of financial independence, and we have made proposals accordingly. It is true that the University will be mainly dependent on the Government for financial support. Apart from fees, the University at first at any rate will have no resources of its own. But we confess to a desire to see it vested with financial control over the grant which it receives from Government as well as over its other receipts. If we may be permitted to employ a simile, the Government should regard the University as a business concern, of which it is a shareholder with a seat on the Board of Directors rather than as a servant to whom it makes certain payments, the disposal of which must be checked frequently and in detail.

"We recommend that the administration of the University be vested in a Chancellor, Vice-Chancellor, Senate and Syndicate. The Chief Commissioner of the Province will be the Chancellor. The Vice-Chancellor will be an honorary officer nominated by the Chancellor. The Senate will be the supreme authority, subject to the general control of the Government. It will be a body of 75 members, consisting partly of representatives of Government and of the general public, partly of elected representatives of the graduates and partly of teachers of the University and the constituent colleges, the latter being nominated by the Chancellor. The Syndicate will be the executive of the University, and will consist of the Vice-Chancellor, the Director of Public Instruction, a member of the Senate nominated by the Chancellor, four Principals of colleges, the Deans of the Faculties, and three members elected by the Senate from among their own number, of whom not more than one shall be a member of the teaching staff. The Chancellor's nominee on the Syndicate should be a person possessed of general administrative experience. In both these bodies the members of the teaching staff will predominate.

"After careful consideration, we have arrived at the conclusion that a university possessing the wide administrative and educational powers which we propose must be governed by a body in which professional and expert opinion will predominate. This we think we have secured by giving the members of the teaching staff a predominant voice in the counsels of the University.

"We recommend that the University shall contain, at its inception, Faculties of Arts, Law and Science, and a department for the training of teachers subordinate to the Faculty of Arts. We have considered the question of establishing a Faculty of Agriculture. But in view of the necessity which the Government Department of Agriculture feels of pursuing a tentative policy for some years to come with regard to agricultural education, we feel that it would be inadvisable at the present juncture to suggest that the University should make provision for instruction in this branch knowledge. As to the Medical and Engineering Schools, they are designed to meet certain special needs, and do not aim at providing courses of a university standard. It will be many years before the demand for higher courses will justify the establishment of Faculties in Medicine and Engineering."

Until recent years, the demand for education, primary or secondary, was satisfied by a few institutions in the larger towns, while in the whole of the rural districts primary education had to be pressed on an apathetic and even obstructive agricultural population. The new spirit of progress in recent years has quickened the public pulse and the efforts of Government to effect improved facilities have responded accordingly. Special grants from the Government of India budget surpluses in recent years have largely been devoted to assisting the District Councils to overtake their arrears of primary school building. District Councils in general have allowed their zeal for education to carry them into programmes of development beyond their means.

Medical.

The medical and sanitary services of the province are respectively controlled by an Inspector-General of Civil Hospitals and a Sanitary Commissioner. The medical department has progressed along comparatively stereotyped lines. A striking advance has been made in recent years with urban sanitation. The principal medical institutions are the Mayo Memorial Hospital at Nagpur, opened in 1874, with accommodation for 84 in-patients; the Victoria Hospital at Jubbulpore, opened in 1886 and accommodating 95 in-patients; the Lady Dufferin Hospital at Nagpur and the Lady Elgin Hospital at Jubbulpore, these last two being for women and containing together accommodation for 73 in-patients. The province has one lunatic asylum at Nagpur. Vaccination is compulsory in some Municipal towns to which the Vaccination Act has been extended. The administration in 1913 sanctioned the opening of peripatetic dispensaries in unhealthy areas.

Administration.

Chief Commissioner, Sir B. Robertson, K.C.S.I., K.C.M.G., C.I.E., I.C.S., LL.D., apptd. 3rd Aug. 1912.

Personal Assistant, Capt. P. H. Champion.

Chief Secretary, The Hon'ble Cecil Upton Wills, I.C.S.

Second Secretary, The Hon'ble Mr. H. C. Gowan, I.C.S.

Third Secretary, The Hon'ble Mr. J. F. Dyer, I.C.S.

Legal Secretary, The Hon'ble Mr. C. S. Findlay, I.C.S.

Under Secretaries, Mr. N. J. Roughton, I.C.S. and Mr. A. Macleod, I.C.S.

Registrar, C. E. Higher, (on special duty) R. W. Hart, Officiating Registrar.

Secretary, Public Works Department (*Irrigation Branch*), The Hon'ble Mr. A. J. Wadley; (Roads and Buildings), Col. J. P. Blakeway, C. M. G., R. E.

Financial Commissioner, The Hon'ble Mr. H. A. Crump., C.S.I., I.C.S. (On combined leave.)

Chief Commissioner, The Hon'ble. Sir Benjamin Robertson, K.C.S.I., K.C.M.G., C.I.E., I.C.S., LL.D.

Officiating Financial Commissioner, The Hon'ble Sir James Walker, K.C.I.E., I.C.S.

BERAR.

Commissioner, The Hon'ble Mr. B. P. Standen, C.I.E., I.C.S.

Members of Council.

NOMINATED MEMBERS.

The Hon'ble Sir James Walker, K.C.I.E., I.C.S.
" " Bertram Prior Standen, C.I.E., I.C.S.
" " Cecil Upton Wills.
" " Alfred John Wadley.
" " C. C. Hughes Hallett.
" " Charles Stewart Findlay, I.C.S.
" " James Ferguson Dyer, I.C.S.
Col. C. R. M. Green, M.D.
Mr. Arthur Innes Mayhew.
" Hyde Clarendon Gowan.
" George Paris Dick.

NON-OFFICIALS.

The Hon'ble Khan Bahadur Nawab Muhammad Salamullah Khan, C.I.E.
" Mr. Sorabji Bezonji Mehta.
" Rai Bahadur Sir Bipin Krishna Bose, Kt., C.I.E.
" Rao Bahadur Madho Rao Ganesh Deshpande.

ELECTED MEMBERS.

The Hon'ble Mr. Moreshwar Rao Dixit, B.A., Bar.-at-Law.
" Rao Bahadur Narayan Rao Kelkar.
" Mr. Pyare Lal Misra.
" " Manoharpant Krishnarao Golwalkar.
" Rai Sahib Govind Lal Purohit.
" Rai Sahib Cullianji Murarji Thackar, Bar.-at-Law.
" Mr. Seohar Raghubir Singh.
" " Shripad Balvant Tambe.
" Rao Sahib Ramchandra Vishnu Mahajani.
" Mr. Yeshwant Govind Deshpande.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, Mr. A. I. Mayhew.

Inspector-General of Police, The Hon'ble Mr. R. C. H. M. King, I.C.S.

Chief Conservator of Forests, Mr. Montague Hill, C.I.E., F.L.S.

Inspector-General of Prisons, Sub pro-tem, Lt.-Col. C. H. Bensley.

Inspector-General of Civil Hospitals, and Sanitary Commissioner, The Hon'ble Col. C. R. M. Green, M.D., I.M.S.

Commissioner of Excise, Mr. A. E. Nelson, I.C.S.

Comptroller (*Financial Dept.*), Mr. J. S. Milne.

Postmaster-General, Mr. H. S. H. Pilkington, C. I. E., M.V.O.

Director of Agriculture and Industries, Officiating, David Clouston.

Registrar of Co-operative Credit Societies, Mr. A. E. Mathias, I.C.S.

CHIEF COMMISSIONERS.

Colonel E. K. Elliot	1861
Lieut.-Colonel J. K. Spence (*Officiating*) .	1862
R. Temple (*Officiating*)	1862
Colonel E. K. Elliot	1863
J. S. Campbell (*Officiating*)	1864
R. Temple	1864
J. S. Campbell (*Officiating*)	1865
R. Temple	1865
J. H. Morris (*Officiating*)	1867
G. Campbell	1867
J. H. Morris (*Officiating*) .. .. .. Confirmed 27th May 1870.	1868
Colonel R. H. Keatinge, V.C., C.S.I. (*Offg.*).	1870
J. H. Morris, C.S.I.	1872
C. Grant (*Officiating*)	1879
J. H. Morris, C.S.I.	1879
W. B. Jones, C.S.I.	1883
C. H. T. Crosthwaite (*Officiating*) .. Confirmed 27th January 1885.	1884
D. Fitzpatrick (*Officiating*)	1885
J. W. Neill (*Officiating*)	1887
A. Mackenzie, C.S.I.	1887
R. J. Crosthwaite (*Officiating*) .. .. Until 7th October 1889.	1889
J. W. Neill (*Officiating*)	1890
A. P. MacDonnell, C.S.I.	1891
J. Woodburn, C.S.I. (*Officiating*) .. .. Confirmed 30th November 1893.	189[illegible]
Sir C. J. Lyall, C.S.I., K.C.I.E.	1895
The Hon'ble Mr. D. C. J. Ibbetson, C.S.I.	1898
" Sir A. H. L. Fraser, K.C.S.I. (*Officiating*) Confirmed 5th March 1902.	1899
The Hon'ble Mr. J. P. Hewett, C.S.I., C.I.E. (*Officiating*) Confirmed 2nd November 1903.	190
The Hon'ble Mr. F. S. P. Lely, C.S.I., K.C.I.E., (*Officiating*) Confirmed 23rd Dec. 1904.	1904
The Hon'ble Mr. J. O. Miller, C.S.I. ..	1905
S. Ismay, C.S.I. (*Officiating*) .. .. Until 22nd October 1906.	1906
F. A. T. Phillips (*Officiating*)	1907
Until 25th March 1907. Also from 20th May to 22nd November	1909
The Hon'ble Sir R. H. Craddock, K.C.S.I.	1907
The Hon'ble Mr. H. A. Crump, C.S.I. (*Officiating*).	1912
" M. W. Fox-Strangways, C.S.I. (Sub *pro tem.*)	1912
The Hon'ble Sir B. Robertson, K.C.S.I., C.I.E.	1912
" Mr. Crump, C. S. I. ..	1914
" Sir B. Roberton, K.C S.I. ..	1914

North-West Frontier Province.

The North-West Frontier Province, as its name denotes, is situated on the north-west frontier of the Indian Empire. It is in form an irregular strip of country lying north by east and south by west and may generally be described as the tract of country, north of Baluchistan, lying between the Indus and the Durand boundary line with Afghanistan. To the north it extends to the mountains of the Hindu Kush. From this range a long broken line of mountains runs almost due south, dividing the province from Afghanistan, until the Sulaiman Range eventually closes the south of the Province from Baluchistan. The greatest length of the province is 408 miles, its greatest breadth 279 miles and its total area about 39,000 square miles. The territory falls into three main geographical divisions: the Cis-Indus district of Hazara; the narrow strip between the Indus and the Hills, containing the Districts of Peshawar, Kohat, Banu and Dera Ismail Khan, and the rugged mountainous regions on the north and west between those districts and the border line of Afghanistan. Hazara and the four districts in the second division contain 13,418 square miles. The mountain regions, north and west, are occupied by tribes subject only to the political control of the Chief Commissioner in his capacity as Agent to the Governor-General. The area of this tract is roughly 25,500 square miles and in it are situated, from north to south, the political agencies severally known as the Malakand, Khyber, Kurram, Tochi and Wana Agencies. Each of the Deputy Commissioners of the five administered districts is responsible for the management of political relations with certain tribes or sections of the tribes across the frontier. A few hundred miles of the trans-border Territory are internally administered by the Political Agents, but the bulk of the trans-border population is free from any internal interference, so long as offences are not committed and so long as the tribes observe the conditions on which allowances are paid to many of them.

The area of the Province is a little more than half that of Bombay (excluding Sind and Aden) and amounts to more than three-fifths of the size of England without Wales. The density of population throughout the Province equals 98 persons to a square mile, but in the more favoured portions the pressure of population is much greater. In the Hazara District there are 207 persons to a square mile and in the trans-Indus plains tract the number is 152. The key to the history of the people of the N.-W. F. P. lies in the recognition of the fact that the valley of Peshawar was always more closely connected politically with Eastern Iran than with India, though in pre-Mahomedan times its population was mainly Indian by race. Early history finds the Iranians dominating the whole Indus valley. Then came the Greek invasion under Alexander the Great, in B.C. 327, then the invasions of the Sakas, and of the White Huns, and later, the two great waves of Muhammadan invasion. Last came the Sikh invasion, beginning in 1818. The Frontier Territory was annexed by the British in 1849 and placed under the control of the Punjab Government. Frequent warfare occurred with the border tribes, but since the conclusion of peace with the Afridis in 1898, the whole border has been undisturbed except for the expedition against the Zakka Khel Afridis in 1908 and the recent blockade Mohmand of 1916-17 and Waziristan Expedition of 1917.

The division of the Frontier Province from the Punjab was frequently discussed, with the double object of securing closer and more immediate control and supervision of the Frontier by the Supreme Government and of making such alterations in the personnel and duties of frontier officials as would tend to the establishment of improved relations between the local British representatives and the independent tribesmen. The province was eventually removed from the control of the Punjab administration in 1901. To it was added the political charge of Dir, Swat and Chitral, the Political Agent of which had never been subordinate to the Punjab. The new Province was constituted under a Chief Commissioner and Agent to the Governor-General, with headquarters at Peshawar, in direct communication with the Government of India in the Foreign Department. In political questions there is no intermediary between the Chief Commissioner and the local officer; an arrangement designed to secure both prompt disposal of references and the utilisation of the expert knowledge of frontier conditions for which the head of the administration is selected.

The People.

The total population of the N.-W.F.P. (1911) is 3,819,027, made up as follows:—

Hazara	603,028
Trans-Indus Districts	1,593,905
Trans-Border Area	1,622,094

This last figure is estimated. There are only 625·6 females per 1,000 males in the towns and 900 females per 1,000 males in rural areas. This disproportion of the sexes cannot at present be explained in the N.-W.F.P. any more than in other parts of Northern India, where it also appears. The discrepancy is greater here than in any other Province of India. There is no ground for believing that the neglect of girls in infancy has any effect in causing this phenomenon. On the other hand, the female population has to face many trials which are unknown to men. The evils of unskilled midwifery and early marriage are among them. Both the birth and death-rates of the Province are abnormally low. The birth rate in the administered districts, according to the last available official reports, is 35·1 and the death rate 33·3. There were 122·5 male births for every 100 females. It is recognised that in this matter, and in regard to population generally, the registration of females may be defective, inasmuch as the Pathan, for whatever reasons, regards the birth of a daughter as a misfortune, the less said about which the better. The population is naturally increasing, but emigration reduces the net result.

The dominant language of the Province is Pashtu and the population contains several lingual strata. The most important section of the population, both numerically and in social position, are the Pathans. They ow

a very large proportion of the land in the administered districts and are the ruling race, of the tribal area to the west. There is a long list of Pathan, Baluch, Rajput and other tribal divisions. Gurkhas have recently settled in the Province. The Mahomedan tribes constitute almost the whole population, Hindus amounting to only 5 per cent. of the total and Sikhs to a few thousands. The occupational cleavage of the population confuses ethnical divisions.

Under the North-West Frontier Province Law and Justice Regulation of 1901. custom governs all questions regarding successions, betrothal, marriage, divorce, the separate property of women, dower, wills, gifts, partitions, family relations such as adoption and guardianship, and religious usages and institutions, provided that the custom be not contrary to justice, equity or good conscience. In these matters the Mahomedan or Hindu law is applied only in the absence of special custom.

Climate, Flora and Fauna.

The climatic conditions of the N.-W.F.P., which is mainly the mountainous region, but includes the Peshawar Valley and the riveraine tracts of the Indus in Dera Ismail Khan District, are extremely diversified. The latter district is one of the hottest areas of the Indian continent, while on the mountain ranges the weather is temperate in summer and intensely cold in winter. The air is generally dry and hence the annual ranges of temperature are frequently very large. The Province has two wet seasons, one the S.-W. Monsoon season, when moisture is brought up from the Arabian Sea and the Bay of Bengal: the other in winter, when storms from Mesopotamia, Persia and the Caspian Districts bring widespread rain and snowfall. Both sources of supply are precarious and not infrequently either the winter or the summer rainfall fails almost entirely. The following description of the Daman, the high ground above the Indus, stretching across Dera Ismail Khan to the mountains on the west, occurs in an account written some years ago by Captain Crostwaite: "Men drink once a day and the cattle every second day. Washing is an impossible luxury. . . . It is possible in the hot weather to ride thirty miles and neither hear a dog bark nor see the smoke of a single fire." With the exception of the Kunhar River, in Hazara, which flows into the Jhelum, the whole territory drains into the Indus. The flora of the Province varies from the shrubby jungle of the south-eastern plains to barren hills, pine forests and fertile mountain valleys. Tigers used to abound in the forests but are now quite extinct; leopards, hyenas, wolves, jackals and foxes are the chief carnivora. Bear, deer and monkeys are found; a great variety of fish is caught in the Indus.

The mountain scenery is often magnificent. The frontier ranges contain many notable peaks of which the following are the principal:

Takht-i-Sulaiman, Sulaiman Range, in Dera Ismail Khan, 11,292 feet.

Pir Ghal, Sulaiman Range, in Mahsud Waziristan, 11,583 feet.

Sika Ram, in the Safed Koh, in the Kurram Agency, 15,621 feet.

Kagan Peaks of the Himalayas, in the Hazara District, 10,000 to 16,700 feet.

Istragh Peak (18,900 ft.), Kachin Peak 22,641 ft.), Tirich Mir (25,426 ft.), all in the Hindu Kush, on the northern border of Chitral Agency.

Trade and Occupations.

The population derives its subsistence almost wholly from agriculture. The Province is practically without manufactures. There is no considerable surplus of commercial products for export. Any commercial importance which the province possesses it owes to the fact that it lies across the great trade routes which connect the trans-border tribal territories and the marts of Afghanistan and Central Asia with India, but the influence of railways is diminishing the importance of these trading interests. The travelling traders (or Powindahs) from the trans-frontier area have always pursued their wanderings into India and now, instead of doing their trading in towns near the border, carry it by train to the large cities in India. Prices of agricultural produce have in recent years been high, but the agriculturists, owing to the poverty of the means of communication, have to some extent been deprived of access to Indian markets and have therefore been unable to profit by the rates prevailing. On the other hand, high prices are a hardship to the non-agricultural classes. The effects of recent extensions of irrigation have been important. Land tenures are generally the same in the British administered districts as in the Punjab. The cultivated area of the land amounts to 32 per cent. and uncultivated to 68 per cent.

The work of civilisation is now making steady progress. Relations with the tribes have improved, trade has advanced, free medical relief has been vastly extended, police administration has been reformed and the desire of people for education has been judiciously and sympathetically fostered. In the British administered districts 19 per cent. males and 7 per cent. females of the total population are returned as literates. The figures for males denote a very narrow diffusion of education even for India. Those for females are not notably low, but they are largely affected by the high literacy amongst Sikh women, of whom 13·3 per cent. are returned as literate. The inauguration of a system of light railways throughout the Province, apart from all considerations of strategy, must materially improve the condition of the people and also by that means strengthen the hold of the administration over them. The great engineering project of the Upper Swat River Canal, which was completed in 1914, and the lesser work of the Paharpur Canal, also completed a year or two ago, will bring ease and prosperity to a number of peasant homes. There has arisen in recent years the difficult question of the importation of thousands of rifles from the Persian Gulf. Elaborate measures were taken to stamp out the traffic, under the direction of the Naval Commander-in-Chief in the East Indies; and with the tardy consent of France an agreement was made with the Sultan of Muscat, to stop the trade in arms from that place, Muscat having been the entrepot for the traffic.

Administration.

The administration of the North-West Frontier Province is conducted by the Chief

Commissioner and Agent to the Governor-General in Council. His staff consists of—

(1) Officers of the Political Department of the Government of India.

(2) Members of the Provincial Civil Service.

(3) Members of the Subordinate Civil Service.

(4) Superintendents and Assistant Superintendents of Police.

(5) Officers recruited for the service of departments requiring special knowledge—Militia, Engineering, Education, Medicine and Forestry.

The cadre posts reserved for officers coming under the first head above are :—

Administration.	Chief Commissioner & Agent to the Governor-General		
	Secretary		
	Assistant Secretary		5
	Personal Assistant		
	Revenue Commissioner and Revenue Secretary		
	Resident in Waziristan...		1
	Deputy Commissioners .. 5		
	Political Agents .. 5		12
	District Judges .. 2		
	Assistant Commissioners and Assistant Political Agents		13
High Court and Divisional Judges.	One Judicial Commissioner.		
	Two Divisional and Sessions Judges.		3

The districts under the Deputy Commissioners are divided into from two to five sub-collectorates, in charge of tahsildars, who are invested with criminal and civil and revenue powers, and are assisted by naib-tahsildars, who exercise only criminal and revenue powers. Some sub-divisions are in charge of Assistant or Extra Assistant Commissioners. The village community characteristic of some parts of India is not indigenous among the Pathans. Its place as a social unit is to some extent taken by the tribe, which is held together by the ties of kinship and ancient ancestry, real or imaginary. Modern municipal local government has been introduced in the towns. There are also district boards. The district is the unit for police, medical and educational administration and the ordinary staff includes a District Superintendent of Police, a Civil Surgeon, who is also the Superintendent of Jail and a District Inspector of Schools. The Province forms a single educational circle and only possesses one forest division, that of Hazara. There are four divisions of the Roads and Building Branch of the Public Works Department, each under an Executive Engineer. The Irrigation Department of the P. W. D. is in charge of a Chief Engineer, Irrigation, who is also *ex-officio* Secretary to the Chief Commissioner. The administration of the civil police force of the districts is vested in an Inspector-General. There is a special force of Frontier Constabulary. The revenue and expenditure of the Province are wholly Imperial. Of the Agencies only Kurram and Tochi Valley pay land revenue to the British Government. The revenue administration of all five administered districts is controlled by the Revenue Commissioner. For the administration of civil and criminal justice there are two Civil and Sessions divisions, each presided over by a Divisional and Sessions Judge. The Judicial Commissioner is the controlling authority in the Judicial branch of the administration, and his Court is the highest criminal and appellate tribunal in this Province. The principal officers in the present Administration are :—

Agent to the Governor General and Chief Commissioner, The Hon'ble Sir George Roos-Keppel, G.C.I.E., K.C.S.I., (assumed charge, 4th June 1908).

Resident Waziristan, The Hon'ble Sir John Donald, K.C.I.E., C.S.I.

Judicial Commissioner, W. P. Barton, C.I.E., I.C.S.

Revenue Secretary, Lieut.-Col. D. B. Blakeway, C.I.E., I.A.

Secretary to Chief Commissioner, E. H. Kealy, I.C.S.

Military Secretary to Chief Commissioner, Lieut. Col. G. J. Davis, D.S.O.

Assistant Secretary to Chief Commissioner, Major W. A. Garstin.

Assistant Financial Secretary to Chief Commissioner, Bhai Sunder Singh.

Indian Personal Assistant to Chief Commissioner, Risaldar Moghal Baz Khan, I.O.M.

Inspecting Officer Frontier Corps, Lieut.-Col. J. S. Kemball, I.A.

Secretary, Public Works Department, Buildings and Roads Branch, Col. H.A.D. Fraser, R.E.

Secretary, Public Works Department, Irrigation Branch, F. W. Carne.

Chief Medical Officer, Lieut.-Col. T. W. Irvine, I.M.S.

Inspector-General of Police, H. A. Close, C.I.E.

Commandant, Frontier Constabulary, R. C. Boyle.

Director of Public Instruction, C. E. W. Jones, M. A.

Superintendent, Archæological Survey, Pandit V. Natesa Aiyar.

Divisional and Sessions Judges, Lieut.-Col. C. F. Minchin, D.S.O., I.A., (Derajat), F P. Rennie, I.C.S. (Peshawar).

Vice President, Provincial Recruiting Board and Special Recruiting Officer, S. E. Pears, C.I.E.

Political Agents.

Major W. J. Keen, C.I.E., I.A., Dir, Swat and Chitral.
Nawab Sir Sahibzada Abdul Qaiyum, K.C.I.E., Khyber.
Major R. Garratt, I.A., Tochi.
Major G. F. W. Anson, I.A., Kurram.
J. A. O. Fitzpatrick, C.I.E., Wana.

Deputy Commissioners.

H. N. Bolton, C.I.E., I.C.S., Peshawar.
C. Latimer, I.C.S., Dera Ismail Khan.
Major C. G. Crosthwaite, Bannu.
T. B. Copeland, I.C.S., Kohat.
J. H. R. Fraser, I. C S., Hazara.

Former Chief Commissioner.

Lieut.-Col. Sir Harold Deane, K.C.S.I ; Died 7th July 1908.

Assam.

The Province of Assam, 61,682 square miles in area, includes the Assam Valley Division, the Surma Valley and Hills Division and the State of Manipur. It owes its importance to its situation on the north-east frontier of India. It is surrounded by mountainous ranges on three sides while on the fourth (the west) lies the Province of Bengal on to the plains of which debouch the two valleys of the Brahmaputra and the Surma which form the plains of Assam. These two valleys are separated from each other by the Assam Range, which projects westward from the hills on the eastern border.

Population.

The total population of the province in 1911 was 7,059,857, of whom 1¼ millions were Mahomedans, 3¼ millions Hindus and 1¼ millions Animists. 46 per cent. of the population speak Bengali, 22 per cent. speak Assamese: other languages spoken in the province are Hindi, Uriya and a great variety of languages classified under the general heading of the Tibeto-Chinese languages. Owing to the great areas of waste and rivers the density of the province is only 115, which, compared with that of most other parts of India, is low, but is more than double that of Burma.

Agricultural Products.

It has agricultural advantages for which it would be difficult to find a parallel in any part of India, climate, soil, rainfall and river systems all being alike favourable to cultivation. Rice is the staple food crop, about 4 million acres being devoted to this crop. In 1915-16 the outturn of rice was 1,319,625 tons. Except in the Himalayan Terai irrigation is unnecessary. Jute and tea are the most important crops grown for export; the area under jute being generally about 40,000 acres, that under tea about 376,000 acres. In 1916 the total number of tea gardens was 779, the production being estimated at 245,385,920 lbs. Wheat and tobacco are also grown and about 30 square miles are devoted to sugarcane. The total area of 'reserved' forest is about 4,907 square miles and the unclassified state forests cover about 18,509 square miles.

Meteorological Conditions.

Rainfall is everywhere abundant, and ranges from 93 to 124 inches. The maximum is reached at Cherrapunji in the Khasi Hills, which is one of the wettest places in the world, having a rainfall of 458 inches. The temperature ranges from 59° at Sibsagar in January to 84° in July. Earthquakes of considerable severity have taken place, by far the worst being that which occurred in 1897.

Land Tenures.

Most of the actual cultivators of the soil usually hold direct from the State, and the area of land on which rent is paid is inconsiderable. A large part of Goalpara and of the more densely populated portions of Sylhet was however included in the permanent settlement of Bengal; and the system of land tenure in Cachar, and the existence of large estates on privileged rates of revenue in Kamrup have tended to produce a tenant class which at the 1901 census amounted to more than one-third of the total number of persons supported by agriculture. In the 1911 census a very marked increase in tenancy throughout the Province is shown.

The Assam Labour and Emigration (Amendment) Bill was passed on the 24th March 1915. The Act carries with it the abolition of the recruiting contractor and the creation of Labour Bureau to supervise recruiting.

Mines and Minerals.

The only minerals in Assam worked on a commercial scale are coal, limestone and petroleum oil. The most extensive coal measures are in the Naga Hills district, where about 300,000 tons are raised annually and used mainly by the river steamers. Limestone is quarried in the Khasi and Jaintia Hills, in Sylhet, and in the Gare hills. Petroleum is worked only in Lakimpur.

An account of the petroleum occurrences in Assam was recently published in the memoirs of the Geological Survey of India. It states that the petroleum localities in this province are confined to a curved belt of country along the basins of the Brahmaputra and Surma. This belt is traceable over a distance of some 800 miles from N.E. Assam through Kachar and Chitagong to the Arakan coast, where it has a S.S.E. trend. It is roughly concentric with the trend of the Burmese oil belt, the distance between the two varying from 70 to 150 miles.

Manufactures and Trade.

Silk is manufactured in the Assam Valley, the weaving being done by the women. Cotton weaving is also largely practised by the women, and almost every house contains a loom; the cloth is being gradually displaced by imported goods of finer texture and colour. Boat building, brass and metal and earthenwares, tea manufacture and limestone burning are the other industries apart from agriculture, which itself employs about 84 per cent. of the population. Assam carries on a considerable **trade** with the adjoining foreign tribes and countries. The total value of **imports** during 1917-18 was Rs. 16,79,915, against Rs. 10,95,124, in the previous year, the increase being Rs. 5,84,791, or 53·4 per cent. The total **exports** amounted to Rs. 16,54,952, against Rs. 9,33,614, in the preceding year, an increase of Rs. 7,21,238 or 77·2 per cent. The total trade with Bhutan was valued at Rs. 26,50,290 in the year under review as against Rs. 18,40,734, in the previous year. The increase of Rs. 8,09,556, or 43·9 per cent. is due chiefly to the inclusion of the trade registered at Tambulpur, which was omitted in the two previous years as being of doubtful correctness.

Communications.

The trade of Assam is chiefly carried by river, but increasing use is being made of the Assam Bengal Railway which runs from the port of Chittagong to Silchar at the eastern

end of the Surma Valley. A branch of that line runs along the south of the Assam Valley from Gauhati to Tinsukia, a station on the Dibru-Sadiya Railway, and is connected with the Surma Valley branch by a line that pierces the North Cachar Hills, the points of junction being Lumding in the northern and Badarpur in the southern valley. The Eastern Bengal State Railway connects Assam with the Bengal system *via* the valley of the Brahmaputra. The excellence of its water communication makes Assam less dependent upon roads than other parts of India; but in recent years the road system has been developed and there is a trunk road through the whole length of the Brahmaputra Valley and an excellent road from Gauhati to Shillong. A large fleet of steamers maintained by the India General Steam Navigation Company and the Rivers Steam Navigation Company plies on the rivers of both valleys. A daily service of passenger boats runs from Goalundo to Dibrugarh.

Finance.

Gross receipts rose in 1916-17 from Rs. 1,79,65,165 in the previous year to Rs. 1,85,05,555, while the gross expenditure fell from Rs. 1,57,69,405 to Rs. 1,49,20,062. The provincial account opened with a balance of Rs. 19,97,779 which included Imperial assignments for various purposes aggregating Rs. 15,84,000. Receipts amounted to Rs. 1,45,57,270 and expenditure to Rs. 1,44,34,836. The provincial account closed with a balance of Rs. 21,20,213 including Rs. 14,69,000 of Imperial assignments.

Education.

There are in the Province at present 4,587 educational institutions including two Arts Colleges with 224,819 students. Of the total population 333,672 are returned as literate. The distribution of literacy naturally varies considerably throughout the Province. The large number of immigrant coolies and of aboriginal tribes tends to lower the proportion of literates in the Brahmaputra Valley, and a comparatively high standard of literacy in the Hills is due mainly to the progress of education amongst the Khasis of whom a large proportion have been converted to Christianity. Amongst the Animists in the Hills the Lushais seem to have an extraordinary keenness for learning, which is the more remarkable, because the administration of their district dates from quite recent times.

Administration.

The province of Assam was originally formed in 1874 in order to relieve the Lieutenant-Governor of Bengal of part of the administration of the huge territory then under him. In 1903, as the result of further deliberations, it was decided to add to the small Province of Assam the eastern portion of its unwieldy neighbour and to consolidate those territories under a Lieutenant-Governor. The Province of Eastern Bengal and Assam as then constituted was again broken up on the 1st of April, 1912: the Eastern Bengal Districts were united with the Bengal Commissionerships of Burdwan and the Presidency to form the Presidency of Bengal under a Governor-in-Council, Bihar, Chota Nagpur and Orissa were formed into a separate province, while the old Province of Assam was re-constituted under a Chief Commissioner.

The capital is Shillong, a town laid out with great taste and judgment among the pine woods on the slopes of the Shillong Range which rises to a height of 6,450 feet above the sea. It was destroyed in the earthquake of 1897 and has been rebuilt in a way more likely to withstand the shocks of earthquake.

Chief Commissioner, The Hon. Mr. Nicholas Dodd Beatson Bell, C.S.I., C.I.E., appointed 1st April 1918
Personal Asst., Captain W. Lowry-Corry, I.A.
Chief Secretary, J. E. Webster, C.I.E.
Second Secretary, A. W. Botham.
Secretary, Public Works Department, F. E. Bull.
Inspector General of Registration, W. L. Scott, I.C.S.
Judges, Abdul Majid on leave, Henry Crawford Liddell.
Director of Public Instruction, J. R. Cunningham.
Inspector-General of Police, Lt.-Col. D. Herbert.
Sanitary Commissioner, Major T. C. M. Young, M. B., I.M.S.
Comptroller, Financial Department, Philip Gordon Jacob, B.A.
Political Agent in Manipur, W. A Cosgrave, I.C.S.
Superintendent and Remembrancer of Legal Affairs, Abdul Majid, B.A.
Director of Land Records and Agriculture, J. McSwiney.
Chief Inspector of Factories, L. H. Taffs.

LEGISLATIVE COUNCIL.

Lieut.-Col. P. R. T. Gurdon, A. W. Botham, C.I.E., Lieut.-Colonel D. Herbert, J. R. Cunningham, M.A., Abdul Majid, F. E. Bull, A. B. Hawkins, Rajendra Narayan Chaudhuri, Rai Nalini Kanta Ray Dastidar, Munshi Riaz Bakhsh, Col. H. E. Banatwala, J. E. Webster, A. Mellor.

Elected Members.

Rai Ghanasyam Barua, Maulvi Saiyid Abdul Majid, Khan Bahadur, Maulvi Saiyid Muhammad Saadulla, Phanidhar Chaliha Rai Bahadur Mr. Tarun Ram Phukan, Ramani Mohan Das, Babu Radha Binod Das, Mr. R. St. J. Hickman, Muhammad Bakar Mazumdar, Khan Bahadur Mr. H. Miller, Mr. Walter Mason.

Chief Commissioners of Assam.

Colonel R. H. Keatinge, C.S.I.	1874
Sir S. C. Bayley, K.C.S.I.	1878
C. A. Elliot, C.S.I.	1881
W. E. Ward	1883
Dennis Fitzpatrick, C.S.I.	1887
J. Westland, C.S.I.	1889
J. W. Quinton, C.S.I.	1889
Brig.-General Sir H. Collett, K.C.B. ..	1891
W. E. Ward, C.S.I.	1891
C. J. Lyall, C.S.I.	1894
H. J. S. Cotton, C.S.I.	1896
J. B. Fuller, C.I.E.	1900
J. B. Fuller, C.I.E.	1902
C. W. Bolton, C.S.I.	1903

Note.—The Chief Commissionership of Assam was revived 1st April 1912
Sir Archdale Earle, K.C.I.E. 1912

Baluchistan.

Baluchistan is an oblong stretch of country occupying the extreme western corner of the Indian Empire. It is divided into three main divisions; (1) British Baluchistan with an area of 9,476 square miles consisting of tracts assigned to the British Government by treaty in 1879; (2) Agency Territories with an area of 44,345 square miles composed of tracts which have, from time to time, been acquired by lease or otherwise brought under control and placed directly under British officers; and (3) the Native States of Kalat and Las Bela with an area of 78,434 square miles. The Province embraces an area of 134,638 square miles and according to the census of 1911 it contains 834,703 inhabitants, divided roughly half and half between the administered districts and States.

The country, which is almost wholly mountainous, lies on a great belt of ranges connecting the Safed Koh with the hill system of Southern Persia. It thus forms a watershed the drainage of which enters the Indus on the east and the Arabian Sea on the south while on the north and west it makes its way to the inland lakes which form so large a feature of Central Asia. Rugged, barren, sun-burnt mountains, rent by high chasms and gorges, alternate with arid deserts and stony plains, the prevailing colour of which is a monotonous sight. But this is redeemed in places by level valleys of considerable size in which irrigation enables much cultivation to be carried on and rich crops of all kinds to be raised.

The political connection of the British Government with Baluchistan commenced from the outbreak of the First Afghan War in 1839; it was traversed by the Army of the Indus and was afterwards occupied until 1842 to protect the British lines of communication. The districts of Kachi, Quetta and Mastung were handed over to the Amir of Afghanistan and Political Officers were appointed to administer the country. At the close of the First Afghan War, the British withdrew and these districts were assigned to the Khan of Kalat. The founder of the Baluchistan Province as it now exists was Sir Roberts Sandeman who broke down the close border system and welded the Baluch and Brahui Chiefs into a close confederacy. In the Afghan War of 1879 Pishin, Sibi, Harnai and Thal-Chotiali were handed over by Yakub Khan to the British Government and retained at Sir Robert Sandeman's strenuous insistence.

Industries.

Baluchistan lies outside the monsoon area and its rainfall is exceedingly irregular and scanty. Shahrig which has the heaviest rainfall, records no more than 11¾ inches in a year. In the highlands few places receive more than 10 inches and in the plains the average rainfall is about 5 inches, decreasing in some cases to 3. The majority of the indigenous population are dependent for their livelihood on agriculture, provision and care of animals and transport. The Afghan and the Baluch, as a rule, cultivate their own lands. The Brahuis dislike agriculture and prefer a pastoral life. Previous to the advent of the British life and property were so insecure that the cultivator was fortunate if he reaped his harvest. The establishment of peace and security has been accompanied by a marked extension of agriculture which accounts for the increase in the numbers of the purely cultivating classes. The Mekran Coast is famous for the quantity and quality of its fish and the industry is constantly developing. Fruit is extensively grown in the highlands and the export is increasing.

Education is imparted in about 150 schools with over 4,000 scholars. The mineral wealth of the Province is believed to be considerable, but cannot be exploited until railways are developed. Coal is mined at Khost on the Sind-Pishin railway and in the Bolan Pass. Chromite is extracted in the Quetta-Pishin District, but the industry awaits the extension of the railway from Khanai to Hinduhagh for its adequate exploitation. Lime-stone is quarried in small quantities. An oil-prospecting licence has been granted by the Las Bela State to the Burma Oil Company.

Administration.

The head of the local administration is the officer styled Agent to the Governor-General and Chief Commissioner. Next in rank comes the Revenue Commissioner who advises the Agent to the Governor-General in financial matters and generally controls the revenue administration. The keynote of administration in Baluchistan is self-government by the tribesmen, as far as may be, by means of their Jirgas or Councils of Elders along the ancient customary lines of tribal law, the essence of which is the satisfaction of the aggrieved and the settlement of the feud, not retaliation on the aggressor or the vindictive punishment of a crime. The district levies which normally numbered 2,300 odd play an unobtrusive but invaluable part in the work of the Civil Administration not only in watch and ward and the investigation of crime, but also in the carrying of the mails, the serving of processes and other miscellaneous work. In addition to these district levies there are ordinarily three irregular Corps in the Province; the Zhob Militia (formerly known as the Zhob Levy Corps), the Makran Levy Corps, and the Chagai Levy Corps. Their combined strength in the latest returns was 953 cavalry and 892 infantry. The Province does not pay for itself and receives large subsidies from the Imperial Government. The receipts and expenditure roughly balance each other at 29 lakhs.

ADMINISTRATION.

Agent to the Governor-General and Chief Commissioner, The Hon'ble Mr. H. R. C. Dobbs, C.S.I., C.I.E., I.C.S.

Revenue and Judicial Commissioner, Lt.-Col. A. B Dew, C.S.I., C.I.E.

Secretary, Public Works Department, Colonel R. S. Maclagan, C.B., C.S.I.

First Assistant to the Agent to the Governor-General and Secretary to the Chief Commissioner, Major R. H. Chenevix-French.

Second Assistant to the Agent to the Governor-General, Captain G. B. Walker, I.A.

Political Agent, Zhob, Lieut.-Colonel A. L. Jacob, I.A.

Assistant Political Agent, Kalat and Bolan Pass, Major T. G. M. Harris, I.A.

Assistant for Mekran to the Political Agent in Kalat and ex-officio Commandant, Mekran Levy Corps, Capt. G. Halas.

Political Agent and Deputy Commissioner, Quetta and Pishin, Major H. B. St. John, C.I.E., I.A.

Assistant Political Agent and Assistant Commissioner, Quetta, Major H. R. N. Pritchard.

Political Agent, Chagai, Major W. G. Hutchinson, I.A.

Political Agent and Deputy Commissioner, Sibi, Lieut.-Colonel F. McConaghey.

Assistant Political Agent, Sibi, T. J. C. Acton, I.C.S.

Political Agent, Loralai, Major C. E. Bruce, I.A.

Residency Surgeon and Chief Medical Officer, Dr. T. H. Holland, M.D.

Civil Surgeon, Sibi, J. A. Guizelar.

ANDAMAN AND NICOBAR ISLANDS.

This is a group of islands in the Bay of Bengal of which the headquarters are at Port Blair, by sea 780 miles from Calcutta, 740 miles from Madras and 360 miles from Rangoon, with which ports there is regular communication.

The land area of the islands under the administration is 3,143 square miles, namely, 2,508 square miles in the Andamans and 635 square miles in the Nicobars. The total population of the islands was returned in the census of 1911 as 26,459. The Islands are administered by the Chief Commissioner of the Andaman and Nicobar Islands who is also the Superintendent of the Penal Settlement. The penal settlement, which was established in 1858, is the most important in India.

Superintendent of Port Blair, Lieut.-Col. M. W. Douglas, C.I.E.

Acting Commandant and District Superintendent of Military Police, B. T. Roussac.

Medical Superintendent of Jails, and Senior Medical Officer, Major J. H. Murray, I.M.S.

COORG.

Coorg is a small petty Province in Southern India west of the State of Mysore. Its area is 1,582 square miles and its population 174,976. Coorg came under the direct protection of the British Government during the war with Sultan Tipu of Seringapatam. In May 1834, owing to misgovernment, it was annexed. The Province is directly under the Government of India and administered by the Chief Commissioner of Coorg who is the Resident in Mysore with his headquarters at Bangalore. In him are combined all the functions of a local government and a High Court. The Secretariat is at Bangalore where the Assistant Resident is styled Secretary to the Chief Commissioner of Coorg. In Coorg his chief authority is the Commissioner whose headquarters are at Mercara and whose duties extend to every branch of the administration. The chief wealth of the country is agriculture and especially the growth of coffee. Although owing to over-production and insect pests coffee no longer commands the profits it once enjoyed, the Indian output still holds its own against the severe competition of Brazil. The bulk of the output is exported to France.

Resident and Chief Commissioner, Coorg, H. V. Cobbe.

AJMER-MERWARA.

Ajmer-Merwara is an isolated British Province in Rajputana. The Agent to the Governor-General in Rajputana administers it as Chief Commissioner. The Province consists of two small separate districts, Ajmer and Merwara, with a total area of 2,711 square miles and a population of 501,395. At the close of the Pindari war Daulat Rao Scindia, by a treaty dated June 25, 1818, ceded the district to the British. Fifty-five per cent. of the population are supported by agriculture, the industrial population being principally employed in the cotton and other industries. The principal crops are maize, millet, barley, cotton, oil-seeds and wheat.

Agent to the Governor-General in Rajputana and Chief Commissioner of Ajmer-Merwara, Lt.-Col. J. Manners-Smith, V.C., C.V.O., C.I.E.

Aden was the first new territory added to the Empire after the accession of Queen Victoria. Its acquisition in 1839 was the outcome of an outrage committed by the local Fadhli chief upon the passengers and crew of a British buggalow wrecked in the neighbourhood. Various acts of treachery supervened during the negotiations regarding the buggalow outrage and Aden was captured by a force sent by the Bombay Government under Major Baillie. The act has been described as one of those opportune political strokes which have given geographical continuity to British possessions scattered over the world.

Aden is an extinct volcano, five miles long and three broad, jutting out to sea much as Gibraltar does, having a circumference of about 15 miles and connected with the mainland by a narrow isthmus of flat ground. This is nearly covered at one part at high spring tides, but the causeway and aqueduct are always above, though sometimes only just above, water. The highest peak on the wall of precipitous hills that surrounds the old crater which constitutes Aden is 1,775 feet above sea level. Rugged spurs, with valleys between, radiate from the centre to the circumference of the crater. A great gap has been rent by some volcanic disturbance on the sea surface of the circle of hills and this opens to the magnificent harbour. The peninsula of Little Aden, adjacent to Aden proper, was obtained by purchase in 1868 and the adjoining tract of Shaikh Othman, 39 square miles in extent, was subsequently purchased when, in 1882, it was found necessary to make provision for an over-flowing population.

Attached to the settlement of Aden are the islands of Perim, an island of 5 square miles extent in the Straits of Bab-el-Mandeb, in the entrance to the Arabian Sea; Sokotra island, at the entrance to the Gulf of Aden, in the Arabian Sea, acquired by treaty in 1886 and 1,382 miles in extent; and the five small Kuria Muria islands, ceded by the Imam of Maskat in 1854 for the purpose of landing the Red Sea cable, and otherwise valuable only for the guano deposits found upon them. They are off the Arabian coast about two-thirds of the way from Aden to Maskat. The whole extent of the Aden settlement, including Aden, Little Aden, Shaikh Othman and Perim, and subject to post-war adjustments, is approximately 80 miles. The 1911 census showed Aden, with Little Aden, Shaikh Othman, and Perim to have a population of 46,165. The population of Perim is a matter of a few hundreds, largely dependent on the Coal Depot maintained there by a commercial firm. That of Sokotra is 12,000, mostly pastoral and migratory inland, fishing on the coast.

Strategic Importance.

Aden's first importance is as a naval and military station of strategic importance. This aspect was ably discussed by Colonel A. M. Murray, in his "Imperial Outposts." He points out that Aden is not a naval base in the same sense that Gibraltar, Malta and Hong Kong were made, but a *point d'appui*, a rendezvous and striking point for the fleet. It was seized in 1839 because of its usefulness as a harbour of refuge for British ships and from a strategist's point of view this is its primary purpose and the *raison d'etre* of its forts and garrison. Aden under British rule has retained its ancient prestige as a fortress of impregnable strength, invulnerable by sea and by land, dominating the entrance to the Red Sea, and valuable to its owners as a commercial emporium, a port of call and a cable centre. The harbour extends 8 miles from east to west and 4 from north to south and is divided into two bays by a spit of land. The depth of water in the western bay is from 3 to 4 fathoms, across the entrance 4½ to 5 fathoms, with 10 to 12 fathoms 2 miles outside. The bottom is sand and mud. There are several islands in the inner bay. Strategic control of the Red Sea was rendered complete by the annexation of Perim and Sokotra, which may both be regarded as outposts of Aden, and are under the political jurisdiction of the Resident.

The Arab chiefs of the hinterland of Arabia are nearly all stipendiaries of the British Government. Colonel Wahab and Mr. G. H. Fitzmaurice, of the Constantinople Embassy, were appointed in 1902 as Commissioners to delimitate the frontier between Turkish Arabia and the British protectorate around Aden. A convention was signed in 1905 settling details, the frontier line being drawn from Shaikh Murad, a point on the Red Sea coast opposite Perim, to the bank of the river Bana, the eastern limit of Turkish claims, at a point some 29 miles north-east of Dthala, and thence north-east to the great desert. The area left within the British Protectorate was about 9,000 square miles. The arrangement gave to Turkey Cape Bab-el Mandeb, which forms the Arabian bank of the eastern channel past Perim into the Red Sea. England took this gatepost of the Red Sea from the Turks in November 1914. A sanitorium and small British garrison used to be maintained at Dthala, which is 7,700 feet high; but the garrison was withdrawn in 1906, Lord Morley explaining this step as being in accordance with the policy stated in the House of Lords in 1903,—that His Majesty's Government had never desired to interfere with the internal and domestic affairs of the tribes on the British side of the boundary, but had throughout made it plain that they would not assent to the interference of any other Power with those affairs. Affairs in this respect have been disarranged considerably by the war.

British Policy.

There has been much criticism of a policy under which Aden has failed to advance with the same progressive strides which have marked the development of other British dependencies. It is said that the former Persian possessors of Aden built its wonderful water tanks, and the Arabs made an aqueduct 20 miles long, while the British have done nothing except mount guns to protect their coal yards. Trade, it is argued, flourishes because this is a natural emporium of commerce, but not because of the attention its needs get from Government. Lord Roberts, writing on this point a few years ago said: "It is not creditable to British rule to make use of a dependency like Aden for selfish purposes of political necessity without attempting to extend the benefits of civilised Government to the neighbouring native tribes, especially when those tribes are living under the aegis of the British Crown. The Persians, the Turks and even the Arabs did more for Aden in their time than we have done during our seventy years' occupation.....Aden has always suffered under the disadvantage of being an

appanage of the Bombay Presidency, with which it has neither geographical, racial nor political affinity. Probably the best solution of the matter would be to hand over the place to the Colonial Office, relieving the Government of Bombay of a charge which is only looked upon as an incubus." Some important steps have been taken in the past few years to satisfy the commercial needs of the port.

Trade.

The trade of Aden has developed immensely since British acquisition in 1839, largely through the Government of India declaring it a free port in 1850, since when it has attracted much of the valuable trade between Arabia and Africa, formerly monopolised by the Red Sea ports of Hodeida and Mokha. The opening of the Suez Canal was also responsible for a large increase of trade through Aden into the interior. The total imports by sea in the last official year (1913-14) before the war set the course of progress awry amounted to £3,756,964; by land £170,213; treasure, £450,305; exports by sea were £3,267,283; by land, £140,159; treasure, £741,687. These statistics are exclusive of Government stores and treasure.

The language of the settlement is Arabic, but several other Asiatic tongues are spoken. The population is chiefly returned as Arabs and Shaikhs. The Somalis from the African coast and Arabs do the hard labour of the port. So far as the settlement is concerned there are no products whatever, with the important exception of salt. The crops of the tribal low country adjoining are jowar, sesamum, a little cotton, madder, a bastard saffron and a little indigo. In the hills, wheat, madder, fruit, coffee and a considerable quantity of wax and honey are obtained. The water supply forms the most important problem. Water is drawn from four sources—wells, aqueducts, tanks or reservoirs and condensers.

Administration.

The Aden settlement was until last year subject to the Government of Bombay but it politically to the [illegible] has now been handed over to the Foreign Office. Its administration is conducted by a Resident, who is assisted by four Assistants. The Resident is also ordinarily military Commandant and has hitherto usually been an officer selected from the Indian army, as have his assistants. The Resident has jurisdiction as a Judge of the Vice-Admiralty Court in matters connected with slave trading, his court being called the Colonial Court of the Admiralty. The laws in force in the settlement are generally speaking those in force in the Bombay Presidency, supplemented on certain points by special regulations to suit local conditions. The management of the port is under the control of a Board of Trustees formed in 1888. The principal business of the Port Trust has been the deepening of the harbour, so as to allow vessels of all sizes to enter and leave at all states of the tide. The Aden police force numbers slightly over 200 men. There are hospitals and dispensaries in both Aden and Perim, in addition to the military institutions of this character. The garrison comprises a troop of engineers, three companies of garrison artillery, one battalion of British infantry, two companies of sappers and miners and one Indian regiment. Detachments from the last named are maintained at Perim and Shaikh Othman respectively.

The average temperature of the station is 87 degrees in the shade, the mean range being from 75 in January to 98 in June, with variations up to 102. The lulls between the monsoons, in May and September are very oppressive. Consequently, long residence impairs the faculties and undermines the constitution of Europeans and even Indians suffer from the effects of too long an abode in the settlement, and troops are not posted in the station for long periods, being usually sent there one year and relieved the next. But Aden is exceptionally free from infectious diseases and epidemics, and the absence of vegetation, the dryness of the soil and the purity of the drinking water constitute efficient safeguards against many maladies common to tropical countries. The annual rainfall varies from ¼ inch to 8½ inches, with an irregular average of 3 inches.

The War.

At the outset of the war the Turks established themselves on the Arabian shore of the straits of Bab-el-Mandeb. They were driven off, their fort captured and then guns taken, by a force landed from a British warship. But in July, 1915, a mixed force of Turks and Arabs advanced against the Aden Settlement. News was made known in India by a Reuter telegram of July 9th, which said that the Turks and Arabs threatened Lahej, that at the request of the Sultan of Lahej a force was sent for the protection of his capital, and that the supporting force was so beset with water and transport difficulties that it was decided to retire, and the whole force withdrew to Aden, the enemy declining to follow. Subsequently came an official intimation that the Sultan of Lahej who had been grievously wounded in a fight against the raiding force had died in Aden whither he had been taken for surgical treatment. The Government of India announced on July 22nd that on the [illegible] the morning of the 21st instant a force from by Aden Garrison attacked the position taken by the Turks, a few miles outside the settlement, and drove them from it, the pursuit being continued for a distance of five miles. No further detailed information on the matter has been made public, but Earl Curzon stated in the House of Lords on December 4th, 1917, that the British forces were then holding an arc at about 11 miles from Aden and that so far as was known the Turks in the vicinity had no direct communication with Turkey and had not received supplies or reinforcements. These were withdrawn when Turkey capitulated.

The following are the principal officers of the present administration:—

Political Resident, Major-General James Marshall Stewart, C.B.

Assistant Residents, Major S. G. W. Hume (Perim), Lieut.-Colonel W. M. P. Wood, Major H. S. Strong, Major B. R. Reilly and Captain H. M. Wightwick.

The area enclosed within the boundaries of India is 1,773,168 square miles, with a population of 315,132,537 of people—nearly one-fifth of the human race. But of this total a very large part is not under British Administration. The area covered in the Native States is 675,267 square miles with a population of seventy millions. The Native States embrace the widest variety of country and jurisdiction. They vary in size from petty states like Lawa, in Rajputana, with an area of 19 square miles, and the Simla Hill States, which are little more than small holdings, to States like Hyderabad, as large as Italy, with a population of thirteen millions. They include the inhospitable regions of Western Rajputana, Baroda, part of the Garden of India, Mysore, rich in agricultural wealth, and Kashmir, one of the most favoured spots on the face of the globe. In the case of 175 States control is exercised by the Government of India, and of about 500 by the Provincial Governments. The four principal States, Hyderabad, Mysore, Baroda and Kashmir, are in direct relation with the Government of India. The other States are grouped under the direction of an Agent to the Governor-General, as for Rajputana and Central India; in one case the Provincial Government has been compelled to group its States, those of Kathiawar, under an Agent to the Governor.

Relations with the Paramount Power.

So diverse are the conditions under which the Native States were established and came into political relation with the Government of India, that it is impossible even to summarise the treaties. But broadly it may be said that as the British boundaries expanded, the states came under the influence of the Government and the rulers were confirmed in their possessions. To this general policy however there was, for a brief period, an important departure. During the regime of Lord Dalhousie the Government introduced what was called the annexation through lapse. That is to say, when there was no direct heir, the Government considered whether public interests would be secured by granting the right of adoption. Through the application of this policy, the states of Satara and of Nagpur fell in to the power of East India Company, and the kingdom of Oudh was annexed because of the gross misgovernment of its rulers. Then came the Mutiny. It was followed by the transference of the dominions of the East India Company to the Crown, and an irrevocable declaration of policy toward the Native States. In the historic Proclamation of Queen Victoria it was set out that "We desire no extension of our present territorial possessions; and while we will permit no aggression on our dominions or our rights to be attempted with impunity, we shall allow no encroachments on those of others. We shall respect the rights, dignity and honour of the Native Princes as our own; and we desire that they, as well as our own subjects, should enjoy that prosperity and that social advancement which can only be secured by internal peace and good government." Since the issue of that proclamation there has been no encroachment on the area under Native rule by the Government of India. On the contrary, the movement has been in the opposite direction. In 1881 the State of Mysore, which had been so long under British administration that the traditions of Native rule were almost forgotten, was restored to the old Hindu ruling house. In 1911 the Maharajah of Benares, the great taluqdar of Oudh, was granted ruling powers over his extensive possessions. On many occasions the Government of India has had to intervene, to prevent gross misgovernment, or to carry on the administration during a long minority; but always with the undeviating intention of restoring the territories as soon as the necessity for intervention passed. Almost all states possess the right of adoption in default of heirs.

Rights of Native States.

The rights and obligations of the Native States are thus described by the Imperial Gazetteer. The Chiefs have, without exception, gained protection against dangers from without and a guarantee that the protector will respect their rights as rulers. The Paramount Power acts for them in relation to foreign Powers and other Native States. The inhabitants of the Native States are the subjects of their rulers, and except in case of personal jurisdiction over British subjects, these rulers and their subjects are free from the control of the laws of British India. Criminals escaping to a Native State must be handed over to it by its authorities; they cannot be arrested by the police of British India without the permission of the ruler of the State. The Native Princes have therefore a suzerain power which acts for them in all external affairs, and at the same time scrupulously respects their internal authority. The suzerain also intervenes when the internal peace of their territories is seriously threatened. Finally they participate in all the benefits which the protecting power obtains by its diplomatic action, or by its administration of its own dominions, and thus secure a share in the commerce, the railways, the ports, and the markets of British India. Except in rare cases, applied to maritime states, they have freedom of trade with British India although they levy their own customs, and their subjects are admitted to most of the public offices of the British Government.

Obligations of Native States.

On the other hand the Native States are under an obligation not to enter into relations with foreign nations or other states; the authority of their rulers has no existence outside their territories. Their subjects outside their dominions become for all intents and purposes British subjects. Where foreign interests are concerned, the Paramount Power must act so that no just cause of offence is given by its subordinate allies. All Native States alike are under an obligation to refer to the British every question of dispute with other states. Inasmuch as the Native States have no use for a military establishment other than for police, or display, or for co-operation with the Imperial Government, their military forces, their equipment and armament are prescribed by the Paramount Power. Although old and unaltered treaties declare that the British Government will have no manner of concern with any of a Maharajah's dependents or servants, with respect to whom the Maharajah is absolute, logic and public opinion

have endorsed the principle which Lord Canning set forth in his minute of 1860, that the "Government of India is not precluded from stepping in to set right such serious abuses in a Native Government as may threaten any part of the country with anarchy or disturbance, nor from assuming temporary charge of a Native State when there shall be sufficient reason to do so." Of this necessity the Governor-General in Council is the sole judge, subject to the control of Parliament. Where the law of British India confers jurisdiction over British subjects or other specified persons in foreign territory, that power is exercised by the British courts which possess it. The subjects of European Powers and the United States are on the same footing. Where cantonments exist in Native territory, jurisdiction both over the cantonment and the civil station is exercised by the suzerain power.

Political Officers.

The powers of the British Government are exercised through Political Officers who as a rule reside in the states themselves. In the larger states the Government is represented by a Resident, in groups of states by an Agent to the Governor-General, assisted by local Residents or Political Agents. These officers form the sole channel of communication between the Native States and the Government of India and its Foreign Department, with the officials of British India and with other Native States. They are expected to advise and assist the Ruling Chiefs in any administrative or other matters on which they may be consulted. Political Agents are similarly employed in the larger States under the Provincial Governments, but in the petty states scattered over British India the duties of the Agent are usually entrusted to the Collector or Commissioner in whose district they lie. All questions relating to the Native States are under the special supervision of the Supreme Government, and in the personal charge of the Governor-General. A proposal has been made by the Government of India that, in view of the increasing importance of the Native States, an additional Secretary, styled the Political Secretary, shall be appointed, who shall be in special charge, under the Viceroy, of these questions.

Closer Partnership.

Events have tended gradually to draw the Paramount Power and the Native States into closer harmony. Special care has been devoted to the education of the sons of Ruling Chiefs, first by the employment of tutors, and afterwards by the establishment of special colleges for the purpose. These are now established at Ajmere, Rajkot, Indore and Lahore. The Imperial Cadet Corps whose headquarters are at Dehra Dun, imparts military training to the scions of the ruling chiefs and noble families. The spread of higher education has placed at the disposal of the Native States the products of the Universities. In these ways there has been a steady rise in the character of the administration of the Native States, approximating more closely to the British ideal. Most of the Native States have also come forward to bear their share in the burden of Imperial defence. Following on the spontaneous offer of military assistance when war with Russia appeared to be inevitable over the Penjdeh incident in 1885, the states have raised a portion of their forces up to the standard of the Native troops in the Indian Army. These are termed Imperial Service Troops; they belong to the states, they are officered by Indians; but they are inspected by a regular cadre of British officers, under the general direction of the Inspector-General of Imperial Service Troops. Their numbers are approximately 22,000 men; their armament is the same as that of the Indian Army and they have done good service often under their own Chiefs, on the Frontier and in China and in Somaliland. Secure in the knowledge that the Paramount Power will respect their rights and privileges, the Ruling Chiefs have lost the suspicion which was common when their position was less assured, and the visits of the Prince of Wales in 1875, of the Prince and Princess of Wales in 1905-06, and of the King and Queen in 1911-12 have tended to seal the devotion of the great feudatories to the Crown. The improvement in the standard of native rule has also permitted the Government of India largely to reduce the degree of interference in the internal affairs of the Native States. The new policy was authoritatively laid down by Lord Minto, the then Viceroy, in a speech at Udaipur in 1909, when he said:—

"Our policy is with rare exceptions, one of non-interference in the internal affairs of the Native Statees. But in guaranteeing their internal independence and in undertaking their protection against external aggression it naturally follows that the Imperial Government has assumed a certain degree of responsibility for the general soundness of their administration and could not consent to incur the reproach of being an indirect instrument of misrule. There are also certain matters in which it is necessary for the Government of India to safeguard the interests of the community as a whole as well as those of the paramount power, such as railways, telegraphs and other services of an Imperial character. But the relationship of the Supreme Government to the State is one of suzerainty. The foundation-stone of the whole system is the recognition of identity of interests between the Imperial Government and Durbars and the minimum of interference with the latter in their own affairs."

HYDERABAD.

Hyderabad, the premier Native State in India, is in the Deccan. Its area is 82,698 square miles and population 13,374,676. The general physical characteristics of the State are an elevated plateau, divided geographically and ethnologically by the Manjra and Godaveri rivers. To the North-West is the Trappean region, peopled by Marathas, a country of black cotton soil, producing wheat and cotton. To the South-East is the granatic region of the Telugus and producing rice.

HISTORY.—In pre-historic times Hyderabad came within the great Dravidian zone. The date of the Aryan conquest is obscure, but the dominions of Asoka 272 to 231 B.C. embraced the northern and western portions of the State. Three great Hindu dynasties followed, those of the Pallavas, Chalukyas and Yadavas. In

1294 the irruption of the Mahomedans under Ala-ud-din Khilji, commenced, and thencefor ward till the time of Aurungzebe the history of the State is a confused story of struggles against the surviving Hindu kingdom of the South, and after the fall of Vijayanagar, with each other. Aurungzebe stamped out the remains of Mahomedan independence of the South, and set up his General, Asaf Jah, of Turcoman descent, as Viceroy, or Subhadar of the Deccan in 1713. In the chaos which followed the death of Aurungzebe, Asaf Jah had no difficulty in establishing and maintaining his independence, and thus founded the present House. During the struggle between the British and the French for mastery in India, the Nizam finally threw in his lot with the British, and unshaken even by the excitement of the mutiny, has been so staunch to his engagements as to earn the title of "Our Faithful Ally." The present ruler is His Exalted Highness Sir Usman Ali Khan Bahadur Fateh Jung, G.C.S.I.

THE BERARS.—A most important event in the history of the State occurred in November 1902, when the Assigned Districts of Berar were leased in perpetuity to the British Government. These districts had been administered by the British Government on behalf of the Nizam since 1853; under the treaties of 1853 and 1860, they were "assigned" without limit of time to the British Government to provide for the maintenance of the Hyderabad contingent, a body of troops kept by the British Government for the Nizam's use, the surplus revenues, if any, being payable to the Nizam. In course of time it had become apparent that the maintenance of the Hyderabad contingent on its old footing as a separate force was inexpedient and unnecessary, and that similarly the administration of Berar as a separate unit was very costly, while from the point of view of the Nizam, the precarious and fluctuating nature of the surplus was financially inconvenient. The agreement of 1902 re-affirmed. His Highness' sovereignty over Berar, which instead of being indefinitely "assigned" to the Government of India, was leased in perpetuity to an annual rental of 25 lakhs (nearly £167,000); the rental is for the present charged with an annual debit towards the repayment of loans made by the Government of India. The Government of India were at the same time authorised to administer Berar in such manner as they might think desirable, and to redistribute, reduce, re-organise and control the Hyderabad Contingent, due provision being made, as stipulated in the treaty of 1853, for the protection of His Highness' dominions. In accordance with this agreement the Contingent ceased in March 1903 to be a separate force and was re-organised and redistributed as an integral part of the Indian Army, and in October 1903 Berar was transferred to the administration of the Chief Commissioner of the Central Provinces.

ADMINISTRATION.—The Nizam is supreme in the State and exercises the power of life and death over his subjects. For convenience in administration the Minister is the chief controlling authority in the State. To assist him there are four Assistant Ministers, Financial and Public Works, Judicial, Military and Ecclesiastical. All questions of importance are referred to the Council, which is composed of the Minister as President, and the Assistant Ministers as Members. Business disposed of by the Council is immediately reported to the Nizam. The actual work of the departments is done by six Secretaries. Below the Secretariat the State is divided into Subhas or Divisions, Districts and Talukas. Fifteen District, 88 Taluk and nine Divisional Boards are at work in the District. A Legislative Council, consisting of 23 members, of whom 12 are official and 11 non-official, is responsible for making laws. The State maintains its own currency, the Osmania Sicca rupee with a subordinate coinage. In 1904 an improved Mahbubia rupee was struck and this exchanges with the British rupee at the ratio of 115 or 116 to 100. It has its own postal system and stamps for internal purposes. It maintains its own Army, comprising 17,347 troops, of which 5,980 are classed as Regular and 11,367 as Irregular. There are in addition 1,271 Imperial Service Troops.

FINANCE.—After many vicissitudes, the financial position of the State is strong. The current budget provides for a revenue of Rs. 547 lakhs and a service expenditure of Rs. 601 lakhs. The revenue prospects thus indicated are the worst on record for many years, owing to the failure of the South-West monsoon. It is anticipated that the revenue receipts will fall short of the figures of the year 1917-18 by over 70 lakhs.

PRODUCTION AND INDUSTRY.—The principal industry of the State is agriculture, which maintains 57·1 per cent. of the population. The common system of land tenure is ryotwari. As no reliable figures are available to show the gross produce it is impossible to say what proportion the land revenue bears to it, but it is collected without difficulty. The principal food crops are millet and rice; the staple money crops cotton, which is grown extensively on the black cotton soils, and oil-seeds. The State is rich in minerals. The great Warangal coal measures are worked at Singareni, but the efforts to revive the historic gold and diamond mines have met with very qualified success. The manufacturing industries are consequent on the growth of cotton, and comprise three spinning and weaving mills and ginning and pressing factories in the cotton tracts.

COMMUNICATIONS.—One hundred and thirty-seven miles of the broad gauge line from Bombay to Madras traverse the State. At Wadi, on this section, the broad gauge system of the Nizam's Guaranteed State Railway takes off, running East to Warangal and South-East toward Bezwada, a total length of 330 miles. From Hyderabad the metre gauge Godaveri Railway runs North-West to Manmad on the Great Indian Peninsula Company's system 391 miles. There are thus 471 miles of broad gauge and 391 of metre in the State. The Barsi Light Railway owns a short extension to Latur. The roads are generally inferior.

EDUCATION.—The State maintains two Colleges. The Nizam College at Hyderabad (first grade) is affiliated to the Madras University. The Oriental College at Hyderabad prepares students for the local Moulvi and Munshi examinations. There are 21 high schools, 80 middle schools, 1,041 primary schools, and 23 special schools including a Medical School in the Dominions.

British Resident—Sir S. M. Fraser, K.C.S.I., C.I.E.

MYSORE.

The State of Mysore is surrounded on all sides by the Madras Presidency except on the north and north-west where it is bounded by the districts of Dharwar and North Canara respectively and towards the south-west by Coorg. It is naturally divided into two regions of distinct character; the hill country (the Malnad) on the west and the wide-spreading valleys and plains (the Maidan) on the east. The State has an area of 29,461 square miles excluding that of the Civil and Military Station of Bangalore and a population of 5,705,359, of whom over 92 per cent. are Hindus. Kanarese is the distinctive language of the State.

HISTORY.—The ancient history of the country is varied and interesting. Tradition connects the table-land of Mysore with many a legend enshrined in the great Indian epics, the Ramayana and the Mahabharata. Coming down to historical times, the north-eastern portion of the country formed part of Asoka's Empire in the third century B. C. Mysore then came under the rule of the Andhra dynasty. From about the third to the eleventh century A. D. Mysore was ruled by three dynasties, the north-western portion by the Kadambas, the eastern and northern portions by the Pallavas and the central and southern portions by the Gangas. In the eleventh century, Mysore formed part of the Chola dominion but the Cholas were driven out early in the twelfth century by the Hoya alas, an indigenous dynasty with its capital at Halebid. The Hoysala power came to an end in the early part of the fourteenth century. Mysore was next connected with the Vijayanagar Empire. At the end of the fourteenth century, Mysore became associated with the present ruling dynasty. At first tributary to the dominant empire of Vijayanagar, the dynasty attained its independence after the downfall of Vijayanagar in 1565. In the latter part of the eighteenth century the real sovereignty passed into the hands of Haidar Ali and then his son Tippu Sultan. In 1799, on the fall of Seringapatam, the British Government restored the State comprised within its present limits, to the ancient dynasty in the person of Maharaja Sri Krishnaraja Wadiyar Bahadur III. Owing to the insurrections that broke out in some parts of the country, the management was assumed by the British Government in 1831. In 1881 the State was restored to the dynasty in the person of Sri Chamarajendra Wadiyar Bahadur under conditions and stipulations laid down in the Instruments of Transfer. That ruler with the assistance of Mr. (afterwards Sir) K. Seshadri Iyer, K.C.S.I., as Dewan, brought Mysore to a state of great prosperity. He died in 1894 and was succeeded by the present Maharaja Sir Sri Krishnaraja Wadiyar Bahadur, G.C.S.I., who was installed in 1902. In November 1913, the Instrument of Transfer was replaced by a Treaty which indicates more appropriately the relation subsisting between the British Government and the State of Mysore.

ADMINISTRATION.—The city of Mysore is the capital of the State, but Bangalore City is the administrative head quarters. His Highness the Maharaja is the ultimate authority in the State and the administration is conducted under his control, by the Dewan and three Members of the Council including the Extraordinary Member. The Chief Court consisting of three Judges is the highest judicial tribunal in the State. A Representative Assembly meets twice a year at Mysore—once in October during the Dasara and a second time during the latter part of April. In the October Session the Dewan presents to the Assembly an account of the Finances of the State of the preceding Official year and deals also with the more important administrative measures. Representations about wants and grievances are heard and discussed. In the April Session the Budget for the ensuing year is placed before the Assembly and its opinion invited. Such of the representations of the October Session as were not heard for want of time are taken up and discussed along with the fresh subjects brought up. There is also a Legislative Council consisting of 25 members, of whom 12 are officials, and 13 non-officials, eight elected and five nominated. The Council has been given the privileges of interpellation and discussion of the State budget. All the important branches of the administration are controlled by separate heads of departments. For administrative purposes, the State is divided into 8 districts and subdivided into 68 talukas, each district being under a Deputy Commissioner and District Magistrate and each taluk under an Amildar and subordinate Magistrate. The State maintains a military force of 3,688 including 921 in the Imperial Service Lancers and 558 in the Imperial Service Transport Corps, which are on active service.

The cash balance at the beginning of 1917-18 was 66 lakhs. Total receipts during the year 1917-18 were Rs. 299 lakhs and total disbursement 275. The principal revenue heads are:—Land Revenue Rs. 109 lakhs; Mining Royalty Rs. 17 lakhs; Forest revenue Rs. 45 lakhs; Excise Rs. 59 lakhs; Stamps Rs. 12 lakhs; Railways Rs. 11 lakhs and Electric Power Rs. 12 lakhs. Mysore pays an annual subsidy of Rs. 35 lakhs to the British Government besides contributing indirectly to the British Revenues under Customs and Salt.

ECONOMIC CONFERENCES.—The Mysore Economic Conference was organised in June 1911 with the object of creating and keeping alive public interest in matters connected with the economic progress of the State by a frequent interchange of views and discussions among those competent to deal with them and in order to associate men of enlightenment, public spirited citizens, prominent agriculturists, merchants and others with the officers of Government in such deliberations. The Conference meets annually at Mysore during the festivities in connection with His Highness the Maharaja's birthday. The Dewan is the President of the Conference. It has three Central Committees dealing with questions connected with Agriculture, Education and Industries and Commerce, and Committees for developing economic activities in local areas, such as districts, talukas and towns. Under the auspices of the Conference a monthly Journal

is issued in English and a weekly paper in Kannada, and bulletins on important subjects are periodically issued.

Agencies for carrying on the work of the Economic Conference in the interior of the State.

(1) There is a full time officer attached to each District, called the District Economic Superintendent, whose main duty is to study and investigate local conditions and organise economic activities in the District.

(2) A number of non-official gentlemen have been appointed Honorary Supervisors in Taluks to assist Taluk Progress Committees and other agencies connected with the Economic Conference in stimulating the activities of the people in the advancement of education, agriculture, industries and trade.

AGRICULTURE.—Nearly three-fourths of the population are employed in agriculture and the general system of land tenure is Ryotwari. The principal food crops are ragi, rice, jola, millets, gram and sugarcane and the chief fibres are cotton and san-hemp. Over 28,000 acres are under mulberry, the silk industry being the most profitable in Mysore next to gold mining. A Superintendent of Seri-culture has recently been appointed, arrangements are being made for the supply of disease free seed and a central and 6 Taluka Popular Schools have been started. The Department of Agriculture which was recently reorganised on a large scale is popularising agriculture on scientific lines by means of demonstrations, investigations and experiments. There is one Central Farm at Hebbal to deal with all classes of crops and two others, one at Hiriyur in connection with cotton and crops suited to localities where the rainfall is light and the other at Marathur in the region of heavy rainfall. A Sugarcane Farm has been opened under the new Krishnarajasagara works and Committees have been constituted in several districts for the development of the Sugarcane cultivation.

Industries and Commerce.—A Department of Industries and Commerce was organised in 1913 with a view to the development of Industries and Commerce in the State. Its main functions are stimulating private enterprise by the offer of technical advice and other assistance for starting new industries, undertaking experimental work for pioneering industries and developing existing industries and serving as a general bureau of information in industrial and commercial matters. A system of granting loans for the purchase of machinery and appliances has been introduced in the State. The manufacturing industries include two cotton mills, two woollen mills, twelve cotton ginning mills, three cotton presses, and three silk filatures. There are also four oil mills, eleven rice mills, nine sugar mills, four brick and tile factories, three cigar factories, three tanneries, fifteen mechanical workshops, two distilleries, one silk reeling house, twelve flour mills, three bone-meal factories, three coffee curing works, four dyeing factories, two hosieries, one brewery, twelve iron and brass foundries, one lacquer work factory, two taxidermic works, four saw-mills, one weaving factory, one Pharmaceutical work, one wood turning and one art Lithographic press. In addition there are fifty-four pumping plants for irrigation. The Sandalwood Oil Factory started on an experimental basis is now working on a commercial scale. The factory at Mysore has also commenced operations on a large scale. Government have sanctioned a scheme for the manufacture of paper pulp from bamboos. Preliminary investigations have been completed for establishing wood distillation and iron works in the State and an agreement has been entered into with Messrs. Tata & Sons for working the Scheme. Local Syndicates have been formed at Davangere and Mysore for establishing cotton mills at those places. A button factory has just been started as well as a soap factory and a metal working factory. Concessions have been granted to a private gentleman in Mysore for the manufacture of matches as a home industry. An Arts and Crafts Depot has been opened to give special encouragement for inlay workers, sandalwood carvers and to those engaged in preparing high class silk, lace clothes and metal works. Home Industries Institutes have been established at Bangalore and Mysore. The establishment of a Central District and Commercial Museums at District Headquarters has been sanctioned. A Chamber of Commerce has been established at Bangalore with branches at important trade centres. The Department has been reconstituted so as to provide for a separate division for dealing solely with questions relating to commercial developments in the State.

BANKING.—In 1913, a State-aided bank called the Bank of Mysore was started with its headquarters in Bangalore and agencies at many of the important places in the State. Besides this there are one Provincial Bank, 2 District Banks, 15 Federal Banking Unions and 956 Co-operative Societies working with a total working Capital of Rs. 57·64 Lakhs.

COMMUNICATIONS.—The Railway system radiates from Bangalore, various branches of the Madras and Southern Mahratta Railway running through the State. The length of the lines owned by the State and worked under contract by the Company is 411·17 miles, of which 9·88 are of broad gauge and the rest metre gauge. The Kolar District Board Railway (8 miles) and the Bangalore-Chickballapur Light Railway (39 miles) both of 2'-6" gauge together with a tramway from Tarikere to Narasimharajapura (27 miles) 2 feet gauge have been opened and are being worked by State Agency.

Two lines, Chickjapur to Chitaldrug, 21 miles, metre-gauge, and Tadasa-Hubbe, 10 miles, 2 feet gauge, are under construction. Several other projects were under survey and investigation during the year and some of them are about to be taken up for construction in the near future.

EDUCATION.—A separate University for Mysore was established on the 1st July 1916. It is of the teaching and residential type composed of the Central College at Bangalore, and the Maharaja's College at Mysore, with headquarters at Mysore. An important feature is that the University course is one of three years, what corresponds to the first year in

other Universities being in the Collegiate High School which specially trains the students for one year to fit them for the University course. The two colleges are efficiently equipped and organised and there is a training college for men located at Mysore. There is also a college for women at Mysore, *i.e.*, the Maharani's College.

With the introduction of compulsory education in select towns and the increase in the number of village schools, primary education has during recent years made considerable advance. Schools have been started for imparting instruction in agricultural, commercial, engineering and other technical subjects. Adult education and vacational training have also been taken in hand. There were altogether in 1914-15, 4,278 public and 1,859 private educational institutions in the State. This gives one school to every 4·80 square miles of the area and to every 930 inhabitants.

PLACES OF INTEREST.—Mysore City, the capital, is a modern city laid out with fine roads and suburbs. The prominent buildings are the Palace, the Chamarajendra Technical Institute, Government House, the Maharaja's College, the Maharani's College and the Oriental Library.

Bangalore, the largest city in the State and the commercial and manufacturing centre, stands on a table land, 3,000 feet above the sea and is noted for its salubrious climate and luxuriant gardens. The principal places of interest are the Public Offices, the Central College buildings, the Museum, the Lal Bagh, the Indian Institute of Science and the Indian Sanskrit Institute.

The historic town of Seringapatam, the famous Jog Falls, the Kolar Gold Fields, the Sivasamudram Falls, and Belur, Somnathpur and Halebid with their temples of exquisite architecture, are some of the other important places of interest in the State.

Resident in Mysore and Chief Commissioner of Coorg.—H. V. Cobb, C.S.I., C.I.E., I.C.S.

Dewan.—Sardar Desaraj Urs.

BARODA.

The State of Baroda is situated partly in Gujarat and partly in Kathiawar. It is divided into four distinct blocks: (1) the southern district of Navsari near the mouth of the Tapti river, and mostly surrounded by British territory; (2) central district, North of the Narbada, in which lies Baroda, the capital city; (3) to the North of Ahmedabad, the district of Kadi; and (4) to the West, in the Peninsula of Kathiawar, the district of Amreli, formed of scattered tracts of land. The area of the State is 8,182 square miles; the population is over two millions, of whom over four-fifths are Hindus.

HISTORY.—The history of the Baroda State as such dates from the break-up of the Mughal Empire. The first Maratha invasion of Gujarat took place in 1705. In later expeditions Pilaji Gaikwar, who may be considered as the founder of the present ruling family, greatly distinguished himself. Songhad was the headquarters till 1766. Since 1723 Pilaji regularly levied tribute in Gujarat. His son Damaji finally captured Baroda in 1734, since when it has always been in the hands of the Gaikwars; but Mughal authority in Gujarat did not end until the fall of Ahmedabad in 1753, after which the country was divided between the Gaikwar and the Peshwa. In spite of the fact that Damaji was one of the Maratha chiefs defeated at Panipat by Ahmed Shah, he continued to add to his territory. He died in 1768, leaving the succession in dispute between two rival sons. He was succeeded in turn by his sons Savaji Rao I. Fattesing Rao, Manaji Rao and Govind Rao. The last died in 1800, and was succeeded by Anand Rao. A period of political instability ensued which was ended in 1802 by the help of the Bombay Government, who established the authority of Anand Rao at Baroda. By a treaty of 1805 between the British Government and Baroda, it was arranged *inter alia* that the foreign policy of the State should be conducted by the British, and that all differences with the Peshwa should be similarly arranged. Baroda was a staunch ally of the British during the wars with Baji Rao Peshwa, the Pindari hordes and Holkar. But from 1820 to 1841, when Sayaji Rao II. was Gaikwar, differences arose between the two Governments, which were settled by Sir James Carnac, Governor of Bombay in 1841. Ganpat Rao succeeded Sayaji Rao in 1847. During his rule, the political supervision of Baroda was transferred to the Supreme Government. His successor Khande Rao, who ascended the *Gadi* in 1856, introduced many reforms. He stood by the British in the Mutiny. He was succeeded by his brother Malhar Rao in 1870. Malhar Rao was deposed in 1875 for "notorious misconduct" and "gross misgovernment," but the suggestion that he had instigated the attempt to poison Col. Phayre, the Resident, was not proved. Sayaji Rao III., a boy of 13 years of age, who was descended from a distant branch of the family, was adopted as heir of Khande Rao in 1875 and is the present Gaikwar. He was invested with full powers in 1881.

ADMINISTRATION.—An executive council, consisting of the principal officers of the State, carries on the administration, subject to the control of the Maharaja, who is assisted by a Dewan and other officers. A number of departments have been formed, which are presided over by officials corresponding to those in British India. The State is divided

into four *prants* each of which is subdivided into *Mahals* and *Peta Mahals* of which there are in all 42. Attempts have for some years been made to restore village autonomy, and village panchayats have been formed which form part of a scheme for local self-government. There is a Legislative Department, under a Legal Remembrancer, which is responsible for making laws. There is also a Legislative Council, consisting of nominated and elected members. A High Court at Baroda possesses jurisdiction over the whole of the State and hears all final appeals. From the decisions of the High Court, appeals lie in certain cases, to the Maharaja, who decides them on the advice of the Huzur Nyaya Sabha. The State Army consists of 5,084 Regular forces and 3,806 Irregular forces.

FINANCE.—In 1916-17, the total receipts of the State were Rs. 202 lakhs and the disbursements Rs. 155 lakhs. The principal Revenue heads were:—Land Revenue, Rs. 120 lakhs; Abkari, Rs. 22 lakhs; Opium, Rs. 5 lakhs; Railways, Rs. 10 lakhs; Interest Rs. 9 lakhs; Tribute from other States, Rs. 6 lakhs. British Currency was introduced in 1901.

PRODUCTION AND INDUSTRY.—Agriculture and pasture support 63 per cent. of the people. The principal crops are rice, wheat, gram, castor-oil, rapeseed, poppy, cotton, san-hemp, tobacco, sugarcane, maize, and garden crops The greater part of the State is held on *ryotwari* tenure. The State contains few minerals, except sandstone, which is quarried at Songar, and a variety of other stones which are little worked. There are 39 industrial or commercial concerns in the State registered under the State Companies' Act. There are four Agricultural Banks and 353 Co-operative Societies in the Baroda State.

COMMUNICATIONS.—The B. B. & C. I. Railway crosses part of the Navsari and Baroda *prants*, and the Rajputana-Malwa Railway passes through the Kadi *prant*. A system of branch lines has been built by the Baroda Durbar in all the four *prants*, in addition to which the Tapti Valley Railway and the Baroda-Godhra Chord line (B. B. & C. I.) pass through the State. The Railways constructed by the State are about 500 miles in length and 93 miles are under construction. Good roads are not numerous.

EDUCATION.—The Education Department controls 2,719 institutions of different kinds, in 62 of which English is taught. The Baroda College is affiliated to the Bombay University. There are a number of high schools, technical schools, and schools for special classes, such as the jungle tribes and unclean castes The State is "in a way pledged to the policy of free and compulsory primary education." It maintains a system of rural and travelling libraries. Ten per cent. of the population is returned in the census as literate. Total expense on Education is about Rs. 20 lakhs.

CAPITAL CITY.—Baroda City with the cantonment has a population of 99,345. It contains a public park, a number of fine public buildings, palaces and offices; and it is crowded with Hindu temples. The cantonment is to the North-west of the city and is garrisoned by an infantry battalion of the Indian Army. An Improvement Trust has been formed to work in Baroda City and has set itself an ambitious programme.

RULER.—His Highness Farzand-i-Khas-i-Dowlat-i-Englishia Maharaja Sir Sayaji Rao Gaekwar Sena Khas Khel, Samsher Bahadur, G.C.S.I., Maharaja of Baroda.

Resident—C. L. S. Russell, Esq., I.C.S.
Dewan—Manubhai N. Mehta, Esq., M.A., LL.B.

BALUCHISTAN AGENCY.

In this Agency are included the Native States of Kalat, Kharan and Las Bela. The Khan of Kalat is head of the Baluchistan tribal chiefs whose territories are comprised under the following divisions:—Jhalawan, Sarawan, Makran, Kachhi and Domki-Kaheri-Umrani. These districts form what may be termed Kalati Baluchistan, and occupy an area of 54,713 square miles. The inhabitants of the country are either Brahuis or Baluchis, both being Mahomedans of the Sunni sect. The country is sparsely populated, the total number being about 336,423. It derives its chief importance from its position with regard to Afghanistan on the north-western frontier of British India. The relations of Kalat with the British Government are governed by two treaties of 1854 and 1876, by the latter of which the Khan agreed to act in subordinate co-operation with the British Government. There are, however, agreements with Kalat in connection with the construction of the Indo-European telegraph, the cession of jurisdiction on the railways and in the Bolan Pass, and the permanent leases of Quetta, Nushki and Nasirabad. The Khan is assisted in the administration of the State by a Wazir-i-Azam lent by the British Government. The Governor-General's Agent in Baluchistan conducts the relations between the Government of India and the Khan, and exercises his general political supervision over the district. The revenue of the State is about Rs. 11,71,520. The present Khan is, His Highness Beglar Begi Mir Sir Mahmud Khan of Kalat, G.C.I.E. He was born in 1864.

Kharan extends in a westerly and south-westerly direction from near Nushki and Kalat to the Persian border. Its area is 14,210 square miles; it has a population of 22,663 and an annual average revenue of about Rs.1,00,000.

The present Chief, Sardar Habibullah Khan, was born about 1897 and succeeded his father Sardar Yakub Khan in 1911, when the latter was murdered by his uncle Amir Khan. The State is divided into 13 Niabats

and the whole sources of income are entirely agricultural.

Las Bela is a small State occupying the valley and delta of the Purali river, about 50 miles west of the Sind boundary. Area 7,132 square miles; population 61,205, chiefly Sunni Mahomedans, estimated revenue about Rs. 3,8[illegible],140. The Chief of Las Bela, known as the Jam, is bound by agreement with the British Government to conduct the administration of his State in accordance with the advice of the Governor-General's Agent. This control is exercised through the Political Agent in Kalat. The Jam also employs an approved Wazir, to whose advice he is subject and who generally assists him in the transaction of State business.

Agent to the Governor-General for Baluchistan:—Hon. Mr. H. R. C. Dobbs, C.S.I., C.I.E., I.C.S.

RAJPUTANA AGENCY.

Rajputana is the name of a great territorial circle with a total area of about 130,462 square miles, which includes 18 Native States, two chiefships, and the small British province of Ajmer-Merwara. It is bounded on the west by Sind, on the north-west by the Punjab State of Bahawalpur, on the north and north-east by the Punjab, on the east by the United Provinces and Gwalior, while the southern boundary runs across the central region of India in an irregular zigzag line. Of the Native States 17 are Rajput, 2 (Bharatpur and Dholpur) are Jat, and one (Tonk) is Mahomedan. The chief administrative control of the British district is vested *ex-officio* in the political officer, who holds the post of Governor-General's Agent for the supervision of the relations between the several Native States of Rajputana and the Government of India. For administrative purposes they are divided into the following groups:—Alwar Agency; Bikanir Agency, Eastern Rajputana Agency, 3 States (Bharatpur, Dholpur Karauli); Haraoti and Tonk Agency, 3 States (principal States Bundi and Tonk); Jaipur Residency, 3 States (principal State, Jaipur); Kotah and Jhalawar Agency, 2 States; Mewar Residency; Southern Rajputana States Agency, 4 States (principal State, Banswara); Western Rajputana States Agency; 3 States (principal States, Marwar and Sirohi).

The Aravalli Hills intersect the country almost from end to end. The tract to the north-west of the hills is, as a whole, sandy, ill-watered and unproductive, but improves gradually from being a mere desert in the far west to comparatively fertile lands to the north-east. To the south-east on the Aravali Hills lie higher and more fertile regions which contain extensive hill ranges and which are traversed by considerable rivers.

COMMUNICATIONS.—The total length of railways in Rajputana is 1,576 miles, of which 739 are the property of the British Government. The Rajputana-Malwa (Government) runs from Ahmedabad to Bandikui and from there branches to Agra and Delhi. Of the Native State railways the most important is the Jodhpur-Bikaner line from Marwar Junction to Hyderabad (Sind) and to Bikaner.

INHABITANTS.—Over 50 per cent. of the population are engaged in some form of agriculture; about 20 per cent. of the total population are maintained by the preparation and supply of material substances; personal and domestic service provides employment for about 5 per cent. and commerce for 2½ per cent. of the population. The principal language is Rajasthani. Among castes and tribes, the most numerous are the Brahmans, Jats, Mahajans, Chamars, Rajputs, Minas, Gujars, Bhils, Malis, and Balais. The Rajputs are, of course, the aristocracy of the country, and as such hold the land to a very large extent, either as receivers of rent or as cultivators. By reason of their position as integral families of pure descent, as a landed nobility, and as the kinsmen of ruling chiefs, they are also the aristocracy of India; and their social prestige may be measured by observing that there is hardly a tribe or clan (as distinguished from a caste) in India which does not claim descent from, or irregular connection with, one of these Rajput stocks.

The population and area of the States are as follows:—

Name of State.	Area in square miles.	Population in 1911.
Mewar Residency—		
Udaipur	12,953	1,293,776
Banswara	1,946	165,463
Dungarpur	1,447	159,192
Partabgarh	886	62,704
Western States Residency—		
Jodhpur	34,963	2,057,553
Jaisalmer	16,062	88,311
Sirohi	1,964	189,127
Jaipur Residency—		
Jaipur	15,579	2,636,674
Kishangarh	858	87,191
Lawa	19	2,564
Haraoti-Tonk Agency—		
Bundi	2,220	218,730
Tonk	1,114	303,181
Shahpura	405	47,397
Eastern States Agency—		
Bharatpur	1,982	626,665
Dholpur	1,155	270,973
Karauli	1,242	156,786
Kotah-Jhalawar Agency—		
Kotah	5,684	639,089
Jhalawar	810	96,271
Bikaner	23,311	700,983
Alwar	3,141	791,688

Udaipur State (also called Meywar) was founded in about 646 A.D. The capital city is Udaipur, which is beautifully situated on the slope of a low ridge, the summit of which is crowned by the Maharajah's palaces, and to the north and west, houses extend to the banks of a beautiful piece of water known as the Pichola Lake in the middle of which stand two island palaces. It is situated near the terminus of the Udaipur-Chitor Railway, 697 miles north of Bombay. The present ruler is His Highness Maharajadhiraj Maharana Sir Fateh Singh Bahadur, G.C.S.I., G.C.I.E., who was born in 1849 and succeeded in 1884. He is the head of the Seesodia Rajputs and is the Premier Chief. The administration is carried on by the Maharana, assisted by two ministerial officers who form the chief executive department in the State. The revenue and expenditure of the State are now about 35 and 32 lakhs a year respectively. Udaipur is rich in minerals which are little worked. Its archæological remains are numerous, and stone inscriptions dating from the third century have been found.

Banswara State, the southernmost in Rajputana, became a separate State about 1527. Towards the end of the eighteenth century Banswara became more or less subject to the Marathas, and paid tribute to the Raja of Dhar. In 1812 the Maharawal offered to become tributary to the British Government on condition of the expulsion of the Marathas, but no definite relations were formed with him till the end of 1818. The present ruler is His Highness Ray Rayan Maharawal Sri Prithi Singh Bahadur, who was born in 1888 and succeeded his father in 1913. The normal revenue is about 5 lakhs and the expenditure is nearly equal to the income. The area of the State is 1,946 square miles, and the population 187,463.

Dongarpur State, with Banswara, formerly comprised the country called the Pagar. It was invaded by the Mahrattas in 1818. As in other States, inhabited by hill tribes, it became necessary at an early period of British supremacy to employ a military force to coerce the Bhills. The State represents the *Gadhi* of the eldest branch of the Sisodiyas and dates its separate existence from about the close of the 12th Century, when Mahup, the rightful heir to the Chittor Throne, migrated to these parts. The present Chief is His Highness Rai Rayan Maharawal Shri Sir Bijeysinghji Saheb Bahadur, K.C.I.E., born in 1887 and succeeded in 1898. During his minority the State was administered by a Political Officer, a chief Executive Officer and a Consultative Council of two. No railway line crosses the territory, the nearest railway station, Udaipur, being 60 miles distant. Revenue about 3 lakhs.

Partabgarh State, also called the Kanthal, was founded in the sixteenth century by a descendant of Rana Mokal of Mewar. The town of Partabgarh was founded in 1698 by Partab Singh. In the time of Jaswant Singh (1775-1844), the country was overrun by the Marathas, and the Maharawal only saved his State by agreeing to pay Holkar a tribute of *Salim Shahi* Rs. 72,700, (which then being coined in the State Mint was legal tender throughout the surrounding Native States) in lieu of Rs. 15,000 formerly paid to Delhi. The first connexion of the State with the British Government was formed in 1804, but the treaty then entered into was subsequently cancelled by Lord Cornwallis, and a fresh treaty, by which the State was taken under protection, was made in 1818. The tribute to Holkar is paid through the British Government, and in 1904 was converted to Rs.36,350 British currency. The present ruler is His Highness Maharawal Sir Raghunath Singh Bahadur, K.C.I.E., who was born in 1859 and succeeded in 1890. The State is governed by the Mahrawat with the help of the Heir-Apparent, and, in judicial matters, of a Committee of eleven members styled the Raj Sabha or State Council. Revenue about 4 lakhs: expenditure nearly 3¾ lakhs. The financial administration is now under the direct supervision of the State.

Jodhpur State, the largest in Rajputana, also called Marwar, consists largely of desolate, sandy country. The Maharaja of Jodhpur is the head of the Rathor Clan of Rajputs and claims descent from Rama, the deified king of Ayodhya. The earliest known king of the clan lived in the sixth century from which time onwards their history is fairly clear. The foundation of Jodhpur dates from about 1212, and the foundations of Jodhpur City were laid in 1459 by Rao Jodha. The State came under British protection in 1818. In 1839 the British Government had to interfere owing to misrule, and the same thing occurred again in 1868. Jaswant Singh succeeded in 1873 and reformed the State. His son Sardar Singh was invested with powers in 1898, the minority rule having been carried on by his uncle Maharaja Sir Pratab Singh. He died in 1911 and was succeeded by his eldest son Maharaja Sumer Singh Bahadur, who was then 14 years of age. The administration of the State was carried on by a Council of Regency appointed by the Government, presided over by Major-General Maharaja Sir Pratab Singh, who abdicated the Gadi of Idar to carry on as Regent the reforms in Jodhpur which he had begun in the time of his nephew, Maharaja Sir Sardar Singh Bahadur. On the outbreak of the European War both the Maharaja and the Regent offered their services and were allowed to proceed to the Front. The young Maharaja was, for his services at the Front, honoured with an Honorary Lieutenantship in the British Army, and was invested with full ruling powers in 1916 and died in 1918. Revenue 80 lakhs expenditure 50 lakhs.

Jaisalmer State is one of the largest States in Rajputana and covers an area of 16,062 square miles. The Rulers of Jaisalmer belong to the Jadon clan and claim descent from Krishna. Jaisalmer City was founded in1156, and the State entered into an alliance of perpetual friendship with the British Government in 1818. In 1844, after the British conquest of Sind the forts of Shahgarh, Garsia, and Ghotaru, which had formerly belonged to Jaisalmer, were restored to the State. The present Ruling Prince is His Highness Maharajadhiraja Maharawal Shri Jawaharsinghji Bahadur. Revenue about four lakhs.

Sirohi State is much broken up by hills of which the main feature is Mount Abu, 5,650 feet. The Chiefs of Sirohi are Deora Rajputs, a branch of the famous Chauhan clan which furnished the last Hindu kings of Delhi. The present capital of Sirohi was built in 1425. The city suffered in the eighteenth century from the wars with Jodhpur and the depredations of wild Mina tribes. Jodhpur claimed suzerainty over Sirohi but this was disallowed and British protection was granted in 1823. The present ruler is His Highness Maharajah Dhiraj Maharao Sir Kesri Singh Bahadur, G.C.I.E., K.C.I.E. The State is ruled by the Maharao with the assistance of a Musahib Ala who is the heir apparent and other officials. Revenue about 8 lakhs; expenditure 7 lakhs.

Jaipur State is the fourth largest in Rajputana. It consists, for the most part, of level and open country. The Maharaja of Jaipur is the head of the Kachwaha clan of Rajputs, which claims descent from Kusa, the son of Rama, king of Ajodhya, and the hero of the famous epic poem the Ramayana. The dynasty in Eastern Rajputana dates from about the middle of the twelfth century, when Amber was made the capital of a small State. The Chiefs of that State acquired fame as generals under the Mughals in later centuries, one of the best known being Sawai Jai Singh in the eighteenth century who was remarkable for his scientific knowledge and skill. It was he who moved the capital from Amber and built the present city of Jaipur and elevated the State above the principalities around. On his death a part of the State was annexed by the Jats of Bharatpur and internal disputes brought Jaipur to great confusion. British protection was extended to Jaipur in 1818, but the State continued to be disturbed and a Council of Regency was appointed, which governed up to 1851, when Maharaja Ram Singh assumed full powers. He nominated as his successor Kaim Singh who succeeded in 1880, under the name of Sawai Madho Singh II, and is the present ruler. He was born in 1861, and, in consideration of his youth, the administration was at first conducted by a Council under the joint presidency of the Maharaja and the Political Agent. He was invested with full powers in 1882. In 1887, his salute was raised from 17 to 19 guns as a personal distinction, followed in 1896 by two additional guns. In 1888 he was created a G.C.S.I. In 1901 a G.C.I.E., and in 1903 a G.C.V.O. In 1904 he was made honorary colonel of the 13th Rajputs, and in 1911 a Major General. In 1908 he was presented with the Honorary degree of LL.D. of Edinburgh University and in 1912, made a Donat of the Order of the Hospital of St. John of Jerusalem. He was made a G.B.E, in 1918. Among important events of His Highness's rule may be mentioned the raising of the Imperial Service Transport Corps in 1889-90; the construction of numerous irrigation works, hospitals and dispensaries; and the gift of 25 lakhs as an endowment to the Indian People's Famine Relief Trust. His Highness has contributed about 14 lakhs to various War funds, and 10 machine guns as a thank-offering for the recovery of H. M. the King from his accident in France. Jaipur City is the largest town in Rajputana and is one of the few eastern cities laid out on a regular plan. It contains, in addition to the Maharaja's Palace, many fine buildings. The administration of the State is carried on by the Maharaja assisted by a Council of ten members. The military force consists of an Imperial Service Transport Corps which has twice served in Frontier campaigns and in the present war, and about 5,000 infantry, 700 cavalry and 860 artillerymen. The normal revenue is about 65 lakhs; expenditure about 59 lakhs.

Kishangarh State is in the centre of Rajputana and consists practically of two narrow strips of land separated from each other; the northern mostly sandy, the southern generally flat and fertile. The Chiefs of Kishangarh belong to the Rathor clan of Rajputs and are descended from Raja Udai Singh of Jodhpur, whose second son founded the town of Kishangarh in 1611. The State was brought under British protection in 1818. After various disputes necessitating British mediation, the State entered into good hands and was well ruled during the latter part of the nineteenth century. The present ruler is Lieut.-Colonel His Highness Maharajadhiraj Sir Madan Singh Bahadur, K.C.S.I., K.C.I.E., Umdai Rajhai-Buland Makan, who was born in 1884 and was invested with powers in 1905. He administers the State with the help of a Council of two members. His Highness served in France in 1914-15 and was mentioned in despatches by Field-Marshal Lord French. Revenue 5·7 lakhs; Expenditure 4·6 lakhs.

Lawa State, or takurat, of Rajputana is a separate chiefship under the protection of the British Government and independent of any Native States. It formerly belonged to Jaipur and then became part of the State of Tonk. In 1867, the Nawab of Tonk murdered the Thakur's uncle and his followers, and Lawa was then raised to its present State. The Thakurs of Lawa belonged to the Naruka sept of the Kachwaha Rajputs. The present Thakur, Mangal Singh, was born in 1873, and succeeded to the estate in May, 1892. Revenue about Rs. 11,000.

Bundi State is a mountainous territory in the south-east of Rajputana. The Chief of Bundi is the head of the Hara sept of the great clan of Chauhan Rajputs and the country occupied by this sept has for the last five or six centuries been known as Haraoti. The State was founded in the early part of the fourteenth century and constant feuds with Mewar and Malwa followed. It threw in its lot with the Mahomedan emperors in the sixteenth century. In later times it was constantly ravaged by the Marathas and Pindaries and came under British protection in 1818 at which time it was paying tribute to Holkar. The present ruler of this State—which is administered by the Maharao Raja and a Council of 5 in an old-fashioned but popular manner—is His Highness Maharao Raja Sir Raghubir Singh Bahadur, G.C.I.E., G.C.V.O., K.C.S.I. He was born in 1869 and succeeded in 1889. Revenue about 10 lakhs: Expenditure 9·6 lakhs.

Tonk State—Partly in Rajputana and partly in Central India, consists of six districts separated from each other. The ruling family belongs to the Pathans of the Buner tribe. The founder of the dynasty was Amir Khan,

a General in the army of Holkar at the end of the eighteenth century. He received a conditional guarantee of the lands he held from Holkar in 1817. His grandson was deposed in 1867 owing to misrule. The present ruler of the State is His Highness Nawab Sir Muhammad Ibrahim Ali Khan Bahadur, G.C.I.E. The administration is conducted by the Nawab and a Council of three members. Revenue 16 lakhs: Expenditure 15 lakhs.

Shahpura Chiefship is a small pastoral State. The ruling family belongs to the Seesodia clan of Rajputs. The Chiefship came into existence about 1629, being a grant from the Emperor Shah Jahan to one Sujan Singh. The present Chief is Sir Nahar Singh, K.C.I.E., who succeeded by adoption in 1870 and received full powers in 1876. In addition to holding Shahpura by grant from the British Government the Raja Dhiraj possesses the estate of Kachhola in Udaipur for which he pays tribute and does formal service as a great noble of that State. Revenue 3 lakhs: Expenditure 2·6 lakhs.

Bharatpur State.—Consists largely of an immense alluvial plain, watered by the Banganga and other rivers.

The present ruling family are Jats, of the Sinsinwal clan who trace their pedigree to the eleventh century. The Bharatpur ruling family is of the Sinsinwal clan named so after their old village Sinsini. Bharatpur was the first State in Rajputana that made alliance with the British Government in 1803, helped Lord Lake with 5,000 horse in his conquest of Agra and battle of Laswari wherein the Maratha power was entirely broken and received 5 districts as reward for the service. In 1804, however, Bharatpur sided with Jaswant Rao Holkar against the Government which resulted in a fight with the Government. Peace was re-established in 1805 under a treaty of alliance and it continues in force. The State, being usurped by Durjan Sal in 1825, the British Government took the cause of the rightful heir Maharaja Balwant Singh Sahab. Bharatpur was besieged by Lord Combermere, and as the faithful subjects almost all joined the British Army, the result could not be otherwise than capture of the Capital and restoration of the State to its rightful owner. Bharatpur rendered valuable service to the British Government during the Mutiny. The present Chief is a minor, Maharaja Sawai Kishen Singh Bahadur, who was born in 1899 and succeeded in the following year his father Ram Singh, who was deposed. The administration is carried on by a Council of four Members presided over by a Political Agent. Revenue 32 lakhs. Expenditure 31 lakhs.

Dholpur State, the easternmost State in Rajputana, has changed hands an unusual number of times. It was occupied by the British in 1803 and restored to the Gwalior Chief who formerly owned it, but by a fresh arrangement of 1805 it was constituted a State with other districts and made over to Maharaj Rana Kirat Singh, in exchange for his territory of Gohad which was given up to Sindhia. The ruling family are Jats of the Bamraolia clan, the latter name being derived from a place near Agra where the family held land in the twelfth century. The present chief—who is assisted in the administration by three Ministers—is H. H. Maharaj Rana Sir Udaibhan Singh Lokinder Bahadur. He was born in 1893 and succeeded in 1911. He was created a K.C.S.I. in January 1918. Revenue 15 lakhs; Expenditure 12 lakhs.

Karauli State is a hilly tract in Eastern Rajputana, of which the ruler is the head of the Jadon clan of Rajputs who claim direct descent from Krishna and were at one time very powerful. On the decline of the Mughal power the State was subjugated by the Marathas, but by the treaty of 1817 it was taken under British protection. Its subsequent history is of interest chiefly for a famous adoption case, in 1852. The present ruler is H. H. Maharaja Sir Banwar Pal Deo Bahadur, G.C.I.E., who was born in 1864, installed in 1889, and invested with powers in 1889. He is assisted by a council of two members. Revenue 6 lakhs; Expenditure 5 lakhs.

Kotah State belongs to the Hara sect of the clan of Chauhan Rajputs, and the early history of their house is, up to the 17th century, identical with that of the Bundi family from which they are an offshoot. Its existence as a separate State dates from 1625. It came under British protection in 1817. The present ruler is H. H. Lieut.-Colonel Maharao Sir Umed Singh Bahadur, G.C.S.I., G.C.I.E., G.B.E., who was born in 1873 and invested with full powers in 1896. In administration he is assisted by a Diwan (Dewan Bahadur Chaube Raghunath Das, C.S.I.) The most important event of his rule has been the restoration, on the deposition of the late chief of the Jhalawar State, of 15 out of the 17 districts which had been ceded in 1838 to form that principality. Revenue 46 lakhs; Expenditure 42 lakhs.

Jhalwar State (for history see under Kotah) consists of two separate tracts in the south-east of Rajputana. The ruling family belongs to the Jhala clan of Rajputs. The last ruler was deposed for misgovernment in 1896, part of the State was reassigned to Kotah, and Kunwar Bhawani Singh, son of Thakur Chhatarsalji of Fatehpur, was selected by Government to be the Chief of the new State. He was born in 1874 and was created a K.C.S.I. in 1908. He is assisted in administration by a Council, has established many useful institutions, and has done much to extend education in the State. Revenue 6 lakhs.

Bikaner State, the second largest in Rajputana, consists largely of sandy and ill-watered land. It was founded by Bika, a Rathor Rajput, the sixth son of a Chief of Marwar, in the 15th century. Rai Singh, the first Raja, was one of Akbar's most distinguished generals, and built the main fort of Bikaner. Throughout the 18th century there was constant fighting between Bikaner and Jodhpur. In 1818 the Maharaja invited the assistance of British troops to quell a rebellion, and subsequently a special force had to be raised to deal with the dacoits on the southern borders of the State. The Thakurs of the State continued to give trouble up to the eighties. The present Ruler is Major-General H. H. Maharajah Sri Sir

Ganga Singhji Bahadur, G.C.S.I., G.C.I.E., A.D.C. to the King, who was born in 1880 and invested with full powers in 1898. He raised an Imperial Service Camel Corps which served in China and Somaliland, and His Highness served in the former campaign himself, being mentioned in despatches. In 1900 he was awarded the first class Kaisar-i-Hind medal for the active part he took in relieving the great famine of 1899-1900. He is an honorary LL.D. of Cambridge. In administration His Highness is assisted by five secretaries, to each of whom are allotted certain departments; and there is a council of five members which is primarily a judicial body, but is consulted in matters of importance. The revenue of the State is now about sixty lakhs; there are no debts. A coal mine is worked at Palana, 14 miles south of the capital.

Alwar State is a hilly tract of land in the East of Rajputana. Its Rulers belong to the Lalawat Naruka branch of the Kuchhwaha Kshatrias, Solar Dynasty. This ruling family is descended from Raja Udai Karan, who was the common ancestor of both Alwar and Jaipur. The State was founded by Pratab Singh, who before his death in 1791 had secured possession of large portions of the Jaipur State. His successor sent a force to co-operate with Lord Lake in the war of 1803 and an alliance was concluded with him in that year, when the boundaries of the State as now recognised were fixed. Various rebellions and disputes about succession mark the history of the State during the earlier part of the nineteenth century. The present chief, H. H. Lt.-Col. Sewai Maharaja Sir Jey Singhji Bahadur, K.C.S.I., K.C.I.E., who was born in 1882, succeeded his father in 1892 and was invested with powers in 1903. He carries on the administration with the assistance of a Council of four Ministers, Members of His Highness' Council and various heads of departments. The normal revenue and expenditure are about Rs. 32 lakhs a year. The State maintains an Imperial service of cavalry, another of infantry, and an irregular force. The late Maharaja was the first chief in Rajputana to offer (in 1888) aid in the defence of the Empire. The capital is Alwar on the Rajputana-Malwa Railway, 98 miles south-west of Delhi.

RAJPUTANA.

Agent to Governor-General—Lt.-Col. J. Manners-Smith, V.C., C.V.O., C.I.E.

MEWAR.

Resident—G. T. Holme, I.C.S.

JAIPUR.

Resident—Lieut.-Col. R. A. E. Benn.

EASTERN RAJPUTANA STATES.

Political Agent—C. C. Watson, C.I.E.

WESTERN RAJPUTANA STATES.

Resident—Lieut.-Col. A. D. Macpherson.

HARAOTI AND TONK.

Political Agent—S. S. Waterfield.

CENTRAL INDIA AGENCY.

Central India is the name given to the country occupied by the Native States grouped together under the supervision of the Political Officer in charge of the Central India Agency. These States lie between 21° 24′ and 26° 32′ N. lat. and between 74° 0′ and 83° 0′ E. long. The British districts of Jhansi and Lalitpur divide the agency into two main divisions—Bundelkhand and Baghelkhand lying to the east, and Central India proper to the west. The total area covered is 78,772 square miles, and the population (1911) amounts to 93,980. The great majority of the people are Hindus. The principal States are eight in number—Gwalior, Indore, Bhopal, Rewa, Dhar, Jaora, Datia and Orchal of which two, Bhopal and Jaora, are Mahomedan and the rest are Hindu. Besides these there are a multitude of petty States held by their rulers under the immediate guarantee of the British Government, but having feudal relations with one or other of the larger States. The total number of States amounts to 153. For administrative purposes they are divided into the following groups: Baghelkhand Agency, 12 States (principal State Rewa): Bhopal Agency, 19 States (principal Bhopal) State Bhopawar Agency, 21 States (principal State Dhar); Bundelkhand Agency, 22 States (principal States, Datia and Orcha); Gwalior Agency, 32 States (principal State, Gwalior); Indore Residency, 9 States (principal State, Indore); Malwa Agency, 38 States (principal State, Jaora). The Agency may be divided into three natural divisions, the plateau, lowlying, and hilly. The plateau tract includes the Malwa plateau, the Highland tract stretching from the great wall of the Vindhyas to Marwar, the land of open rolling plains. The lowlying tract embraces Northern Gwalior and stretches across into Bundelkhand and Baghelkhand up to the Kaimur Range. The hilly tract lies along the ranges of the Vindhyas and the Satpuras. There agriculture is little practised, the inhabitants being mostly members of the wild tribes. The territories of the different States are much intermingled, and their political relations with the Government of India and each other are very varied. Eleven Chiefs have direct treaty engagements with the British Government.

The following list gives the approximate size, population and revenue of the eight principal States above mentioned:—

Name.	Area in square miles.	Population.	Revenue.
			Rs. lakhs.
Gwalior ..	25,133	3,102,279	140
Indore ..	9,506	1,007,856	70
Bhopal ..	6,902	730,383	30
Rewah ..	13,000	1,512,843	53
Dhar ..	1,783	154,070	9
Jaora ..	568	75 951	8
Datia ..	911	154,603	9
Orcha ..	2,079	330,032	11

Gwalior.—The house of Scindia traces its descent to a family of which one branch held the hereditary post of patel in a village near Satara. The head of the family received a patent of rank from Aurangzebe. The founder of the Gwalior House was Ranoji Scindia who is said to have been a personal attendant on the Peshwa Baji Rao. In 1726 together with Malhar Rao Holkar, the founder of the house of Indore, he was authorised by the Peshwa to collect revenues and he fixed his headquarters at the ancient city of Ujjain, which became the capital of the Scindia dominions. Gwalior subsequently played a leading part in shaping the history of India. The reverses which Scindia's troops met with at the hands of the British in 1778 and 1780 led to the treaty of Salbai (1782), which made the British arbiters in India and recognised Scindia as an independent Chief and not as a vassal under the Peshwa. Subsequently Scindia's military power, developed by the French Commander DeBoigne, was completely destroyed by the British victories of Ahmednagar, Assaye, Asirgarh and Laswari.

The present ruler is Major-General H. H. Maharaja Sir Madho Rao Alijah Bahadur Scindia, G.C.V.O., G.C.S.I., A.D.C. to the King. He succeeded in 1886 and obtained powers in 1894. In 1901 he went to China during the war; he holds the rank of honorary Major-General of the British Army and the honorary degrees of LL.D., Cambridge, and D.C.L., Oxon. He is also a Donat of the Order of St. John of Jerusalem in England. The administration is controlled by the Maharaja assisted by five members of the Majlis-i-khas.

The northern part of the State is traversed by the G. I. P. Railway and two branches run from Bhopal to Ujjain and from Bina to Baran. The Gwalior Light Railway runs for 250 miles from Gwalior to Bhind, from Gwalior to Sheopur and from Gwalior to Sipri. The main industries are cotton ginning, which is done all over the State; fine muslins made at Chanderi, leather work, etc. The State maintains three regiments of Imperial Service Cavalry, two battalions of Imperial Service Infantry and a transport corps. Lashkar, the capital city, is two miles to the south of the ancient city and the fort of Gwalior. Annual expenditure 144 lakhs.

Indore.—The Holkars of Indore belong to the shepherd class, the founder of the house, Malhar Rao Holkar, being born in 1693. His soldierly qualities brought him to the front under the Peshwa, who took him into his service and employed him in his conquests. When the Maratha power was broken at the battle of Panipat, in 1761, Malhar Rao had acquired vast territories stretching from the Deccan to the Ganges. He was succeeded by a lunatic grandson who again was succeeded by his mother, Ahilya Bai, whose administration is still looked upon as that of a model ruler. Disputes as to the succession and other causes weakened this powerful State, and, when it assumed a hostile attitude on the outbreak of war in 1817 between the British and the Peshwa, Holkar was compelled to come to terms. The Treaty of Mandaser in 1818 still governs the regulations existing between the State and the British Government. In the mutiny of 1857, when Holkar was unable to control his troops he personally gave every possible assistance to the authorities at Mhow.

In 1903 Sivaji Rao, who died in 1908, abdicated in favour of his son, His Highness Maharaja Tukoji Rao Holkar, the present ruler, who was born in 1890, and was formally invested with ruling powers in November 1911. In the administration His Highness is assisted by his Chief Minister and a Council of 5 Ministers. The State Army consists of 519 Imperial Service Troops and 1,629 State forces. The capital is Indore City on the Ajmer-Khandwa Section of the Rajputana-Malwa Railway. The ordinary revenue is estimated at Rs. 85 lakhs.

Bhopal.—The principal Mussalman State in Central India, ranks next in importance to Hyderabad among the Muhammadan States of India. The ruling family was founded by Dost Mohammed Khan, a Tirah Afghan in the service of Aurangzeb. He was nominated Governor of the Bairasia Ilaka and succeeded in establishing eventually his independent authority in Bhopal and its neighbourhood. In the early part of the 19th century, the Nawabs successfully withstood the inroads of Scindia and Bhonsla and by the agreement of 1817 Bhopal undertook to assist the British with a contingent force and to co-operate against the Pindari bands.

The present Ruler of the State, Her Highness Nawab Sultan Jahan Begum, C. I., G.C.S.I., G.C.I.E., G.B.E., is the third in the successive line of lady-rulers, who have ruled the destinies of the State with marked ability. Having succeeded in 1901, she personally conducts, and has introduced a number of reforms in the admini tration of her State. Her eldest son, Hon. Colonel Nawab Mahommad Nasrullah Khan, controls the Forest Department and her second son Hon. Major Nawabzada Mahommad Obaidullah Khan, C.S.I., who holds the rank of Brig.-Genl. in the State Army, is the Commander-in-Chief of the State Forces, while the younget Nawabzada, Mahommad Hamidullah Khan, B.A., and Hon. Major in the Bhopal Army, is the head of her Highness' Secretariat and President of the Bhopal Municipality. The State maintains one regiment each of Imperial Service Cavalry and Infantry. The Capital, Bhopal City, on the northern bank of an extensive lake is situated at the junction of the G. I. P. Ry. with the Bhopal Ujjain Railway.

Rewah.—This State lies in the Baghelkhand Agency, and falls into two natural divisions separated by the scarp of the Kaimur range. Its Chiefs are Baghel Rajputs descended from the Solanki clan which ruled over Gujrat from the tenth to the thirteenth century. In 1812, a body of Pindaries raided Mirzapur from Rewah territory and the chief, who had previously rejected overtures for an alliance, was called upon to accede to a treaty acknowledging the protection of the British Government. During the Mutiny, Rewah offered troops to the British, and for his services then, various parganas, which had been seized by the Marathas, were restored to the Rewah Chief. The present chief is H. H. Maharaja Sir Venkat Raman Singh, G.C.S.I., who was born in 1876. He is assisted in the administration by two Commissioners, one for revenue

matters and one for judicial. The State force consist of about 1,700 men. The State is famous for its archæological remains and is rich in minerals, coal being mined at Umaria. The average expenditure is Rs. 11 lakhs.

Dhar.—This State, under the Bhopawar Agency, takes its name from the old city of Dhar, long famous as the capital of the Paramara Rajputs, who ruled over Malwa from ninth to the thirteenth century and from whom the present chiefs of Dhar—Ponwar Marathas—claim descent. In the middle of the 18th century the Chief of Dhar, Anand Rao, was one of the leading chiefs of Central India, sharing with Holkar and Sindhia the rule of Malwa. But in 1819, when a treaty was made with the British, the State had become so reduced that it consisted of little more than the capital. The ruler is H. H. Raja Sir Udaji Rao Ponwar, K.C.S.I., who was born in 1886, and has control of all civil, judicial, and ordinary administrative matters. There are 22 feudatories, of whom 13 hold under a guarantee from the British Government. The average expenditure is about 8 lakhs.

Jaora State.—This State is in the Malwa Agency covering an area of about 600 square miles with a total population of 82,497, and has its headquarters at Jaora town. The first Nawab was an Afghan from Swat, who had come to India to make his fortune, found employment under the freebooter Amir Khan, and obtained the State after the treaty of Mandasore in 1818. The present chief is Major H. H. Sir Iftikhar Ali Khan Bahadur, K.C.I.E, who was born in 1883 and is an Honorary Major in the Indian Army. The soil of the State is among the richest in Malwa, being mainly of the best black cotton variety, bearing excellent crops of poppy. The average annual revenue is Rs. 9,78,909.

Rutlam—Is the premier Rajput State in the Malwa Agency. It covers an area of 871 square miles, including that of the Jagir of Khera in the Kushalgarh Chiefship, which pays an annual tribute to the Ratlam Darbar. The State was founded by Ratansingh, a great grandson of Raja Udai Singh of Jodhpur, in 1652. The Raja of Ratlam is the religious head of the Rajputs of Malwa, and important caste questions concerning even Thakurs tributary to other chiefs are referred to him for decision. The present Chief of Rutlam is Col. His Highness Raja Sir Sajjan Singh, K.C.S.I., who was born in 1880, and invested with full powers in 1898. In administration His Highness is assisted by a Council of four members. Since April 1915, His Highness has been serving at the front in France.

Senior Member of Council,—Rai Bahadur Brijmohannath A. Zutshi, B.A., LL.B.

Datia State.—The chiefs of this State, in the Bundelkhand Agency, are Bundela Rajputs of the Orchha house. The territory was granted by the chief of Orchha to his son Bhagwan Rao in 1626, and this was extended by conquest and by grants from the Delhi emperors. The present chief is H. H. Maharaja Lokendra Govind Singh Bahadur, who was born in 1886 and succeeded in 1907. The heir-apparent, Raja Bahadur Balbhadra Singh (*b* 1907) is being educated at the Daly College.

Orchha State.—The chiefs of this State are Bundela Rajputs claiming to be descendants of the Gaharwars of Benares. It was founded as an independent State in 1048 A. D. It entered into relations with the British by the treaty made in 1812. The present ruler is His Highness Sir Pratap Singh, G.C.S.I., G.C.I.E., who was born in 1854. He has the title of His Highness Saramad-i-rajhai-Bundelkhand Maharaja Mahendra Sawai Bahadur. The present chief enjoys a salute of 17 guns. The State has a population of 330,032 and an area of 2,080 square miles. The capital is Tikamgarh, 36 miles from Lalitpur on the G. I. P. Railway. Orchha, the old capital, has fallen into decay but is a place of interest on account of its magnificent buildings of which the finest were erected by Bir Singh Deo, the most famous ruler of the State (1605-1627).

Agent to Governor-General—O. V. Bosanquet, C.S.I., C.I.E.

GWALIOR.

Resident—W. E. Jardine, C.I.E., I.C.S.

BHOPAL.

Political Agent—W. S. Davis.

BUNDELKHAND.

Political Agent—Lieut.-Col. A. B. Minchin.

BAGHELKHAND.

Political Agent—P. B. Warburton, I.C.S.

Sikkim.

Sikkim is bounded on the north and north-east by Tibet, on the south-east by Bhutan, on the south by the British district of Darjeeling, and on the west by Nepal. The population consists of Bhutias, Lepchas, and Nepalese. It forms the direct route to the Chumbi Valley in Tibet. The main axis of the Himalayas, which runs east and west, forms the boundary between Sikkim and Tibet. The Singalila and Chola ranges, which run southwards from the main chain, separate Sikkim from Nepal on the west, and from Tibet and Bhutan on the east. From the eastern flank of the Singalila range rise the great snow peaks of Kinchinjunga (28,146 feet), one of the highest mountains in the world; it throws out a second spur terminating at Tendong. The Chola range which is much loftier than that of Singalila, leaves the main chain at the Dongkya mountain.

Tradition says that the ancestors of the rajas of Sikkim originally came from eastern Tibet. The State was twice invaded by the Gurkhas at the end of the eighteenth century. On the outbreak of the Nepal War in 1814, the British formed an alliance with the Raja of Sikkim and at the close of the war the Raja was rewarded by a considerable accession of territory. In 1835 the Raja granted the site of Darjeeling to the British and received Rs. 3,000 annually in lieu of it.

This grant was stopped and a part of the State was annexed for the seizure and detention of Dr. Campbell, the Superintendent of Darjeeling, and Dr. Hooker, the famous naturalist, in 1849. The State was previously under the Government of Bengal, but was brought under the direct supervision of the Government of India in 1906. The State is thinly populated, the area being 2,818 square miles, and the population 87,920, chiefly Buddhists and Hindus. The most important crops are maize and rice. There are several trade routes through Sikkim from Darjeeling District into Tibet. In the convention of 1890 provision was made for the opening of a trade route but the results were disappointing, and the failure of the Tibetans to fulfil their obligations resulted in 1904 in the despatch of a mission to Lhasa, where a new convention was signed. Trade with the British has increased in recent years, and is now between 40 and 50 lakhs yearly. A number of good roads have been constructed in recent years. The present ruler, His Highness Maharajah Tashi Namgyal, C.I.E., was born in 1893 and succeeded in 1914. His Highness was invested with full ruling powers on the 5th April 1918. The title of a C.I.E. was conferred upon the Maharaja on the 1st January 1918. The average revenue is Rs. 2,62,000.

Political Officer in Sikkim:—C. A. Bell, C.M.G. (on leave). Major W. L. Campbell, C.I.E. (*Officiating*).

Bhutan.

Bhutan extends for a distance of approximately 190 miles east and west along the southern slopes of the central axis of the Himalayas, adjacent to the northern border of Eastern Bengal and Assam. Its area is 18,000 square miles and its population, consisting of Buddhists and Hindus, has been estimated at 300,000 The country formerly belonged to a tribe called Tek-pa, but was wrested from them by some Tibetan soldiers about the middle of the seventeenth century. British relations with Bhutan commenced in 1772 when the Bhotias invaded the principality of Cooch Behar and British aid was invoked by that State. After a number of raids by the Bhutanese into Assam, an envoy (the Hon. A. Eden) was sent to Bhutan, who was grossly insulted and compelled to sign a treaty surrendering the Duars to Bhutan. On his return the treaty was disallowed and the Duars annexed. This was followed by the treaty of 1865, by which the State's relations with the Government of India were satisfactorily regulated. The State formerly received an allowance of half a lakh a year from the British Government in consideration of the cession in 1865 of some areas on the southern borders. This allowance was doubled by a new treaty concluded in January 1910, by which the Bhutanese Government bound itself to be guided by the advice of the British Government in regard to its external relations, while the British Government undertook to exercise no interference in the internal administration of Bhutan. On the occasion of the Tibet Mission of 1904, the Bhotias gave strong proof of their friendly attitude. Not only did they consent t the survey of a road through their country to Chumbi, but their ruler, the Tongsa Penlop, accompanied the British troops to Lhasa, and assisted in the negotiations with the Tibetan authorities. For these services he was made a K.C.I.E., and he has since entertained the British Agent hospitably at his capital. The ruler is now known as H. H. the Maharaja of Bhutan, Sir Uggen Wangchuk, K.C.S.I., K.C.I.E. At the head of the Bhutan Government, there are nominally two supreme authorities; the Dharma Raja, known as Shapting Renipoche, the spiritual head; and the Deb or Depa Raja, the temporal ruler. The Dharma Raja is regarded as a very high incarnation of Buddha, far higher than the ordinary incarnations in Tibet, of which there are several hundreds. On the death of a Dharma Raja a year or two is allowed to elapse, and his reincarnation then takes place, always in the Choje, or royal family of Bhutan.

Cultivation is backward and the chief crop is maize. The Military force consists of local levies under the control of the different chiefs. They are of no military value.

Nepal.

The kingdom of Nepal is a narrow tract of country extending for about 520 miles along the southern slope of the central axis of the Himalayas. It has an area of about 54,000 square miles, with a population of about 5,000,000, chiefly Hindus. The greater part of the country is mountainous, the lower slopes being cultivated. Above these is a rugged broken wall of rock leading up to the chain of snow-clad peaks which culminate in Mount Everest (29,002 feet) and others of slightly less altitude. The country before the Gurkha occupation was split up into several small kingdoms under Newar kings. The Gurkhas under Prithvi Narayan Shah overran and conquered the different kingdoms of Patan, Kathmandu, and Bhatgaon, and other places during the latter half of the 18th century and since then have been rulers of the whole of Nepal. In 1846 the head of the Rana family obtained from the sovereign the perpetual right to the office of Prime Minister of Nepal, and the right is still enjoyed by his descendant. In 1850 Jung Bahadur paid a visit to England and was thus the first Hindu Chief to leave India and to become acquainted with the power and resources of the British nation. The relations of Nepal with the Government of India are regulated by the treaty of 1816 and subsequent agreements by which a representative of the British Government is received at Kathmandu. This British representative has come to be styled as Resident though his function differs much from that of a Resident at the courts of the Native States of India. By virtue of the same treaty Nepal maintains a Representative at Delhi and her treaty relations with Tibet allow her to keep a Resident at Lhassa of her own. Her relation with China is of a friendly nature. Ever since the conclusion of the treaty of 1816 the friendly relations with the British Government have steadily been maintained and during the rule of the present Prime Minister it has been at its height as is evidenced by the valuable friendly help in men and money which has been given and which was appreciatively mentioned in both the Houses of Parliament and by Mr. Asquith in his Guildhall speech in 1915.

From the foregoing account of the history of Nepal it will be seen that the Government of

the country has generally been in the hands of the Minister of the day. Since the time of Jung Bahadur this system of government has been clearly laid down and defined. The sovereign, or Maharajadhiraja, as he is called, is but a dignified figure-head, whose position can best be likened to that of the Emperor of Japan during the Shogunate. The real ruler of the country is the Minister who, while enjoying complete monopoly of power, couples with his official rank the exalted title of Maharaja. Next to him comes the Commander-in-Chief, who ordinarily succeeds to the office of Minister.

The present Minister at the head of affairs of Nepal is Maharaja Sir Chandra Shum Shere Jung Bahadur Rana, G.C.B., G.C.S.I., G.C.V.C., D.C.L. and Honorary Lieut.-General in the British Army. He has been Prime Minister and Marshal of Nepal since June, 1901.

Rice, wheat and maize form the chief crops in the lowlands. Mineral wealth is supposed to be great, but, like other sources of revenue, has not been developed. Communications in the State are primitive. The revenue is about two crores of rupees per annum. The standing army is estimated at 45,000, the high posts in it being filled by relations of the Minister. The State is of considerable archæological interest and many of the sites connected with scenes of Buddha's life have been identified in it by the remains of inscribed pillars.

Resident, Lieut.-Col. S. F. Bayley.

NORTH-WEST FRONTIER STATES.

The native states of the North-West Frontier Provinces are Amb, Chitral, Dir, Nawagai (Bajaur), and Phulera. The total area is about 7,704 square miles and the population, mainly Mahomedan, is 1,622,094. The average annual revenue of the first four is about Rs. 4,65,000; that of Phulera is unknown.

Amb.—Is only a village on the western bank of the Indus in Independent Tanawala.

Chitral.—Runs from Dir to the south of the Hindu-Kush range in the north, and has an area of about 4,500 square miles. The ruling dynasty has maintained itself for more than three hundred years, during the greater part of which the State has constantly been at war with its neighbours. It was visited in 1885 by the Lockhart Mission, and in 1889, on the establishment of a political agency in Gilgit, the ruler of Chitral received an annual subsidy from the British Government. That subsidy was increased two years later on condition that the ruler, Amam-ul-Mulk, accepted the advice of the British Government in all matters connected with foreign policy and frontier defence. His sudden death in 1892 was followed by a dispute as to the succession. The eldest son Nizam-ul-Mulk was recognised by Government, but he was murdered in 1895. A religious war was declared against the infidels and the Agent at Gilgit, who had been sent to Chitral to report on the situation, was besieged with his escort and a force had to be despatched (April 1895) to their relief.

The three valleys of which the State consists are extremely fertile and continuously cultivated. The internal administration of the country is conducted by the Mehtar, and the foreign policy is regulated by the Political Agent.

Dir.—The territories of this State, about 5,000 square miles in area, include the country drained by the Panjkora and its affluents down to the junction of the former river with the Bajaur or Rud, and also the country east of this from a point a little above Tirah in Upper Swat down to the Dush Khel Country, following the right bank of the Swat river throughout. The Khan of Dir is the overlord of the country, exacting allegiance from the petty chiefs of the clans. Dir is mainly held by Yusufzai Pathans, the old non-Pathan inhabitants being now confined to the upper portion of the Panjkora Valley known as the Bashkar.

Bajaur.—Nawagai is a tract of country included in the territories collectively known as Bajaur which is bounded on the north by the Panjkora river, on the east by the Utman Khel and Mohmand territories and on the west by the watershed of the Kuna river which divides it from Afghanistan. The political system, if it can be termed system, is a communal form of party government, subject to the control of the Khan of Nawagai, who is nominally the hereditary chief of all Bajaur. Under him the country is divided into several minor Khanates, each governed by a chieftain, usually a near relation of the Khan. But virtually the authority of the chieftains is limited to the rights to levy tithe or *ushar*, when they can enforce its payment and to exact military service if the tribesmen choose to render it.

Political Agent for Dir, Swat and Chitral, Major W. J. Keen.

NATIVE STATES UNDER LOCAL GOVERNMENTS.

The Madras Presidency includes 5 Native States covering an area of 10,087 square miles. Of these the States of Travancore and Cochin represent ancient Hindu dynasties. Pudukottai is the inheritance of the chieftain called the Tondiman. Banganapalle and Sandur, two petty States, of which the first is ruled by a Nawab, lie in the centre of two British districts.

Name.	Area sq. miles.	Population.	Approx. Revenue in lakhs of rupees.
Travancore ..	7,129	3,428,975	128
Cochin ..	1,361	918,110	47
Pudukottai ..	1,178	411,878	16
Banganapalle ..	255	39,356	2·8
Sandur ..	161	13,517	1·7

Travancore.—This State occupies the southwest portion of the Indian Peninsula, forming an irregular triangle with its apex at Cape Comorin. The early history of Travancore is a great part traditional; but there is little doubt that H. H. the Maharaja is the representative of the Chera dynasty, one of the three great Hindu dynasties which exercised sovereignty at one time in Southern India. The petty chiefs, who had subsequently set up as independent rulers within the State, were all subdued, and the whole country, included within its present boundaries, was consolidated and brought under one rule, by the Maharaja Marthanda Varma (1729-58). The English first settled at Anjengo, a few miles to the north of Trivandrum, and built a factory there in 1684. In the wars in which the East India Company were engaged in Madura and Tinnevelly, in the middle of the 18th century, the Travancore State gave assistance to the British authorities. Travancore was reckoned as one of the staunchest allies of the British Power and was accordingly included in the Treaty made in 1784 between the East India Company and the Sultan of Mysore. To protect the State from possible inroads by Tippu, an arrangement was come to in 1788 with the East India Company, and in 1795 a formal treaty was concluded, by which the Company agreed to protect Travancore from all foreign enemies. In 1805 the annual subsidy to be paid by Travancore was fixed at 8 lakhs of rupees.

The present ruler is His Highness Maharaja Sir Rama Varma, G.C.S.I., G.C.I.E., who was born in 1857 and ascended the masnad in 1885. The government is conducted in his name with the assistance of a Dewan (Dewan Bahadur M. Krishnan Nair). The work of legislation is entrusted to a Council brought into existence in 1888. An assembly known as the Sri Mulam Popular Assembly meets once a year, when its members are able to bring suggestions before the Dewan. The State supports a military force of 1466 men. Education has advanced considerably in recent years and the State takes a leading place in that respect. The principal food grain grown is rice, but the main source of agricultural wealth is the cocoanut. Other crops are pepper, areca-nut, jack-fruit and tapioca. Cotton weaving and the making of matting from the coir are among the chief industries. The State is well provided with roads, and with a natural system of back-waters, besides canals and rivers navigable for country crafts. Two lines of railways intersect the country, the Cochin-Shoranore in the north-west and the Tinnevelly-Quilon passing through the heart of the State. A third line, from Quilon to Trivandrum, was opened on the 1st January 1918. The capital is Trivandrum.

Political Agent: H. L. Braidwood, I.C.S.

Cochin.—This State on the south-west coast of India is bounded by the Malabar District of the Madras Presidency and the State of Travancore. Very little is known of its early history. According to tradition, the Rajas of Cochin hold the territory in right of descent from Cheraman Perumal, who governed the whole country of Kerala, including Travancore and Malabar, as Viceroy of the Chola Kings about the beginning of the ninth century, and afterwards established himself as an independent Ruler. In 1502, the Portuguese were allowed to settle in what is now British Cochin and in the following year they built a fort and established commercial relations in the State. In the earlier wars with the Zamorin of Calicut, they assisted the Rajas of Cochin. The influence of the Portuguese on the west coast began to decline about the latter part of the seventeenth century, and in 1663 they were ousted from the town of Cochin by the Dutch with whom the Raja entered into friendly relations. About a century later, in 1759, when the Dutch power began to decline, the Raja was attacked by the Zamorin of Calicut, who was expelled with the assistance of the Raja of Travancore. In 1776, the State was conquered by Hyder Ali, to whom it remained tributary and subordinate, and subsequently to his son, Tippu Sultan. A treaty was concluded in 1791 between the Raja and the East India Company, by which His Highness agreed to become tributary to the British Government for his territories which were then in the possession of Tippu, and to pay a subsidy.

His Highness Raja Sri Sir Rama Varmah, G.C.S.I., G.C.I.E., who was born in 1852, and who ascended the Masnad in 1895, having abdicated in December, 1914, His Highness Sri Rama Varmah, who was born on 6th October, 1858, succeeded to the throne and was duly installed as Raja on the 21st January 1915. The administration is conducted under the control of the Raja whose chief Minister and Executive Officer is the Dewan (J. W. Bhore). The forests of Cochin form one of its most valuable assets. They abound in teak, ebony, blackwood, and other valuable trees. Rice forms the staple of cultivation. Cocoanuts are largely raised in the sandy tracts, and their products form the chief exports of the State. Communications by road and back-waters are good, and the State owns a line of railway from

Shorancre to Ernakulam,the capital of the State, and a Forest Steam Tramway used in developing the forests. The State supports a force of 25 officers and 245 men.

Political Agent : H. L. Braidwood, I.C.S.

Pudukottai.—This State is bounded on the north and west by Trichinopoly, on the south by Madura and on the east by Tanjore. In early times a part of the State belonged to the Chola Kings and the southern part to the Pandya Kings of Madura. Relations with the English began during the Carnatic wars. During the siege of Trichinopoly by the French in 1752, the Tondiman of the time did good service to the Company's cause by sending them provisions, although his own country was on at least one occasion ravaged as a consequence of his fidelity to the English. In 1756 he sent some of his troops to assist Muhammad Yusuf, the Company's sepoy commandant, in settling the Madura and Tinnevelly countries. Subsequently he was of mucn service in the wars with Haidar Ali. His services were rewarded by a grant of territory subject to the conditions that the district should not be alienated (1806). Apart from that there is no treaty or arrangement with the Raja. The present ruler is Sri Brihadamba Das, Sir Marthanda Bhairava Tondiman Bahadur, G.C.I.E., who is eighth in descent from the founder of the family. He succeeded in 1886. The Collector of Trichinopoly is ex-officio Political Agent for Pudukottai. The administration of the State, under the Raja, is entrusted to a State Council of three members, a Superintendent (Mr. Sidney Burn I.C.S.), Dewan, and Councillor. The various departments are constituted on the British India model. The principal food crop is rice. The forests, which cover about one-seventh of the State, contain only small timber. There are no large industries. The State is well provided with roads, but Pudukottai is the only municipal town in the State.

Political Agent: H. T. Reilly, I.C.S.

Banganapalle.—This is a small State in two detached portions which in the eighteenth century passed from Hyderabad to Mysore and back again to Hyderabad. The control over it was ceded to the Madras Government by the Nizam in 1800, and subsequently passed through a long period of mismanagement ending in the removal of the Nawab Fateh Ali Khan in 1905. The present ruler is Nawab Meer Ghulam Ali Khan, Bahadur, who administers the State with the assistance of the Dewan, Khan Bahadur Khaja Akbar Hussain. The chief food grains grown are rice, wheat and cholam. Roads have recently been constructed and the capital Banganapalle, is being gradually opened up with broad thoroughfares. The Nawab pays no tribute and maintains no military force. Sericulture, lac cultivation, and weaving industries have lately been started in the State.

Political Agent: H. G. Stokes, C.I.E., I.C.S.

Sandur.—This is a small State almost surrounded by the District of Bellary the Collector of which is the Political Agent. Its early history dates from 1728 when it was first seized by an ancestor of the present Raja, a Maratha named Sidhoji Rao. It subsequently became a vassal to the Peshwa, after whose downfall a formal title for the State was granted by the Madras Government to one Siva Rao. The present ruler is H. H. Raja Srimant Venkata Rao, Rao Saheb Ghorpade, Mamulkat Madar, Senapathi, who was born in 1892. The State is administered by the Raja and the Dewan (M. R. R. A. Subraya Modliar Avergal). The Raja pays no tribute and maintains no military force. The most important staple crop is cholam. Teak and sandal wood are found in small quantities in the forests.

The minerals of the State possess unusual interest. The hematites found in it are probably the richest ore in India. An outcrop near the southern boundary forms the crest of a ridge 150 feet in height, which apparently consists entirely of pure steel grey crystalline hematite (specular iron) of intense hardness. Some of the softer ores used to be smelted, but the industry has been killed by the cheaper English iron. Manganese deposits have also been found in three places, and during 1911 to 1914 over 2,23,000 tons of manganese ore were transported by one company.

Ag. Political Agent : J. M. Turing, I.C.S.

UNDER THE GOVERNMENT OF BOMBAY.

More than a half of the total number of the very various units counted as Native States in India are under the Government of Bombay. The characteristic feature of the Bombay States is the great number of petty principalities; the peninsula of Kathiawar alone contains nearly two hundred separate States. The recognition of these innumerable jurisdictions is due to the circumstance that the early Bombay administrators were induced to treat the *de facto* exercise of civil and criminal jurisdiction by a landholder as carrying with it a quasi-sovereign status. As the rule of succession by primogeniture applies only to the larger principalities, the minor states are continually suffering disintegration. In Bombay, as in Central India, there are to be found everywhere the traces of disintegration and disorder left by the eighteenth century. In no part of India is there a greater variety of principalities. The bulk of them are of modern origin, the majority having been founded by Marathas in the general scramble for power in the middle of the eighteenth century, but several Rajput houses date from earlier times. Interesting traces of ancient history are to be found at Sachin, Janjira and Jafarabad, where chiefs of a foreign ancestry, descended from Abyssinian admirals of the Deccan fleets, still remain. A few aboriginal chiefs, Bhils or Kolis, exercise an enfeebled authority in the Dangs and the hilly country that fringes the Mahi and the Narbada rivers.

The control of the Bombay Government is exercised through Political Agents, whose positions and duties vary greatly. In some of the more important States their functions are confined to the giving of advice and

exercise of a general surveillance: in other cases they are invested with an actual share in the administration; while States whose rulers are minors—and the number of these is always large—are directly managed by Government officers. Some of the States are subordinate to other States, and not in direct relations with the British Government; in these cases the status of the feudatories is usually guaranteed by Government. The powers of the chiefs are regulated by treaty or custom, and range downwards to a mere right to collect revenue in a share of a village, without criminal or civil jurisdiction, as in the case of the petty chiefs of Kathiawar.

The Native States in the Bombay Presidency number 377. Area 65,761 square miles. Population (1911) 7,411,675. They are divided for administrative purposes into the following agencies:—Bijapur Agency, 2 states; Cutch Agency, 1 state; Dharwar Agency, 1 state (Savanur); Kaira Agency, 1 state (Cambay); Kathiawar Agency, 187 states (principal states, Bhavnagar, Dhrangadhra, Gondal, Junagadh, Nawanagar); West Khandesh Agency, 20 states; Kolaba Agency, 1 state (Janjira); Kolhapur Agency, 9 states (principal state Kolhapur, with 9 feudatory states); Mahi Kantha Agency, 51 states (principal state, Idar); Nasik Agency, 1 state ((Surgana); Palanpur Agency, 17 states (principal state, Palanpur); Poona Agency, 1 state (Bhor); Rewa Kantha Agency, 62 states (principal state, Rajpipla); Satara Agency, 2 states; Savantvadi Agency, 1 state; Sholapur Agency, 1 state; Sukkur Agency, 1 state (Khairpur); Surat Agency, 17 states; Thana Agency,1 state (Jauhar). The table below gives details of the area, etc., of the more important States:—

State.	Area in sq. miles	Population.	Approx. Revenue in lakhs of rupees.
Bhavnagar ..	2,860	441,367	47
Cutch ..	7,616	513,429	25
Dhrangadhra ..	1,156	79,142	12
Gondal ..	1,024	161,916	15
Idar ..	1,669	202,811	6
Junagadh ..	3,284	434,222	26
Khairpur ..	6,050	223,788	15
Kolhapur ..	3,165	833,441	57
Navanagar ..	3,791	349,400	22
Palanpur ..	1,750	226,250	5
Rajpipla ..	1,517	161,588	9

Bijapur Agency.—This comprises the Mutara Jaghir of Jath (980.8 square miles in area). The small Estate of Daflapur with an area of 96.8 square miles lapsed to the Jath Jaghir on the demise of its last ruler Ranibai Saheb Dafle in January 1917. On the annexation of Satara, in 1849, Jath and Daflapur the other Satara Jaghirs, became feudatories the British Government. The latter has more than once interfered to adjust the pecuniary affairs of the Jath Jaghir and in consequence of numerous acts of oppression on the part of the then ruler was compelled to assume direct management from 1874 to 1885. The Chief of Jath who belongs to the Maratha caste, is a Treaty Chief and ranks as a first class Sardar. He holds a sanad of adoption, and the succession follows the rule of primogeniture. The gross revenue of the State is about 3 lakhs chiefly derived from land revenue. The Jath State pays to the British Government Rs. 6,400 per annum in lieu of horse contingent and Rs. 4,840 on account of Sardeshmukhi rights.

Political Agent.—Jahangir Kaikhosru Navroji Kabraji, Collector of Bijapur.

Cutch.—The State is bounded on the north and north-west by Sind, on the east by the Palanpur Agency, on the south by the Peninsula of Kathiawar and the Gulf of Cutch and the south-west by the Indian Ocean. Its area, exclusive of the great salt marsh called the Rann of Cutch, is 7,616 square miles. The capital is Bhuj, where the ruling Chief (the Maharao His Highness Maha Rao Sri Khengarji Savai Bahadur, G.C.S.I., G.C.I.E., resides. From its isolated position, the special character of its people, their peculiar dialect, and their strong feeling of personal loyalty to their ruler, the peninsula of Cutch has more of the elements of a distinct nationality than any other of the dependencies of Bombay. The earliest historic notices of the State occur in the Greek writers. Its modern history dates from its conquest by the Sind tribe of Samma Rajputs in the fourteenth century. The section of the Sammas forming the ruling family in Cutch were known as the Jadejas or 'children of Jada.' The British made a treaty with the State in 1815. There is a fair proportion of good arable soil in Cutch, and wheat, barley and cotton are cultivated. Both iron and coal are found but are not worked. Cutch is noted for its beautiful embroidery and silverwork and its manufactures of silk and cotton are of some importance. Trade is chiefly carried by sea. The ruling chief is the supreme authority. A few of the Bhayats are invested with jurisdictional powers in varying degrees in their own Estates and over their own ryots. A notable fact in connection with the administration of the Cutch State is the number and position of the Bhayat. These are Rajput nobles forming the brotherhood of the Rao. They were granted a share in the territories of the ruling chief as provision for their maintenance and are bound to furnish troops on an emergency. The number of these chiefs is 137, and the total number of the Jadeja tribe in Cutch is about 16,000. The British military force having been withdrawn from Bhuj, the State now pays Rs. 82,257 annually as an Anjar equivalent to the British Government. The military force consists of about 1,000 in addition to which, there are some irregular infantry, and the Bhayats could furnish on requisition a mixed force of four thousand.

Political Agent: Lt.-Col. R. S. Pottinger.

Dharwar Agency—This comprises only the small State of Savanur. The founder of the reigning family who are Mahomedans of Pathan origin was a Jagirdar of Emperor Aurangzebe. At the close of the last Maratha War the Nawab of Savanur whose conduct had been exceptionally loyal was confirmed in his possessions

by the British Government. The State pays no tribute. The principal crops are jwari and cotton. The area is 70 square miles and population 17,909. The revenue is about one lakh. The present chief is Captain Abdul Majidkhan Dilerjang Bahadur.

Political Agent, E. G. Turner, I.C.S.

Kaira Agency.—This includes only the State of Cambay at the head of the Gulf of the same name. Cambay was formerly one of the chief ports of India and of the Anhilvada Kingdom. At the end of the thirteenth century it is said to have been one of the richest towns in India; at the beginning of the sixteenth century also it formed one of the chief centres of commerce in Western India. Factories were established there by the English and the Dutch. It was established a distinct State about 1730, the founder of the present family of Chiefs being the last but one of the Mahomedan Governors of Gujarat. The present Nawab is His Highness Mirza Hussein Yawar Khan who is a Shiah Mogul of the Najumisani family of Persia, and was born on the 16th May, 1911. His father, the late Nawab Jaffar Ali Khan, died on 21st January, 1915, leaving him a minor. The State is therefore under British Administration. The State pays a tribute of Rs. 21,924 to the British Government. Wheat and cotton are the principal crops. There is a broad gauge line from Cambay to Petlad, connecting with the B. B. & C. I. Railway at Anand. Cambay is a first class State having full jurisdiction. Revenue is about six lakhs. The area of the State is 350 square miles, population 72,656.

Political Agent, C. Ker, I.C.S.

Kathiawar Agency.—Kathiawar is the peninsula or western portion of the Province of Gujarat, Bombay. Its extreme length is about 220 miles and its greatest breadth about 165 miles, the area being 23,445 square miles. Of this total about 20,882 square miles with a population of 2,496,057 is the territory forming the Political Agency subordinate to the Government of Bombay, established in 1822, having under its control nearly 200 separate States whose chiefs divided amongst themselves the greater portion of the peninsula. The Kathiawar Agency is divided for administrative purposes into four prants or divisions—Jhalawar, Halar, Sorath and Gohelwar—and the States have since 1863 been arranged in seven classes. Since 1822 political authority in Kathiawar has been vested in the Political Agent subordinate to the Government of Bombay. In 1902 the designations of the Political Agent and his Assistants were changed to those of Agent to the Governor and Political Agents of the prants. Before 1865, except for the criminal court of the Agent to the Governor, established in 1831, to aid the Darbars of the several States in the trial of heinous crimes, interference with the judicial administration of the territories was diplomatic, not magisterial; and the criminal jurisdiction of the first and second-class chiefs alone was defined. In 1863, however, the country underwent an important change. The jurisdiction of all the chiefs was classified and defined: that of chiefs of the first and second classes was made plenary; that of lesser chiefs was graded in a diminishing scale. The four Political Agents of the prants resident in the four divisions of Kathiawar, now exercise residuary jurisdiction with large civil and criminal powers. Each Political Agent of a prant has a deputy, who resides at the headquarters of the prant or division, and exercises subordinate civil and criminal powers. Serious criminal cases are committed by the deputies to the court of the Agent to the Governor, to whom also civil and criminal appeals lie. The Agent to the Governor is aided in this work by an officer known as the Political Agent and Judicial Assistant, who is usually a member of the Indian Civil Service. Appeals from his decisions lie direct to the Governor of Bombay in Council in his executive capacity. Two Deputy Assistants also help the Agent.

Agent to the Governor in Kathiawar, Evan Maconochie, C.S.I., I.C.S.

Bhavnagar.—This State lies at the head and west side of the Gulf of Cambay. The Gohel Rajputs, to which tribe the Chief of Bhavnagar belongs, are said to have settled in the country about the year 1260, under Sajakji from whose three sons—Ranoji, Saranji and Shahji—are descended respectively the chiefs of Bhavnagar Lathi and Palitana. An intimate connexion was formed between the Bombay Government and Bhavnagar in the eighteenth century when the chief of that State took pains to destroy the pirates which infested the neighbouring seas. The State was split up when Gujarat and Kathiawar were divided between the Peshwa and the Gaekwar; but the various claims over Bhavnagar were consolidated in the hands of the British Government in 1807. The State pays an annual tribute of Rs. 1,28,060 to the British Government, Rs. 3,581-8-0 as Peshkash to Baroda, and Rs. 22,858 as Zortalbi to Junagadh. H H. Maharaja Raol Shri Bhavsingh, K.C.S.I., is the supreme and final authority in the State. The general administration is conducted under His Highness' direction by the Dewan (Mr. M. A. Tana), who is assisted by the Naib Dewan, the Personal Assistant and the Judicial Assistant. One noteworthy feature in the administration is the complete separation of judicial from executive functions and the decentralisation of authority is another. The authority and powers of all the Heads of Departments have been clearly defined, and each within his own sphere is independent of the others, being directly responsible to the Dewan.

The chief products of the State are grain, cotton and salt. The chief manufactures are oil, copper and brass vessels and cloth. The Bhavnagar State Railway is 205 miles in length and the management of it undertakes also the working of the Dhrangadhra State Railway for a length of 40 miles. The capital of the State is the town and port of Bhavnagar, which has a good and safe harbour for shipping and carries on an extensive trade as one of the principal markets and harbours of export for cotton in Kathiawar. Bhavnagar supports 300 Imperial Service Lancers and 282 Infantry of the Armed Police.

Dhrangadhra State is an uneven tract of land (intersected by small streams) which consists of hilly and rocky ground where stone is quarried. The chief of Dhrangadhra belongs to the Jhala tribe, originally a sub-division of the Makvana family. This tribe is

great antiquity, and is said to have entered Kathiawar from the north, establishing itself first at Patri in the Ahmedabad District, thence moving to Halvad and finally settling in its present seat. The greater part of this territory was probably annexed at one time by the Mahomedan rulers of Gujarat. Subsequently, during the reign of the Emperor Aurangzebe (1658–1707), the sub-division of Halvad, then called Muhammadnagar, was restored to the Jhala family. The petty States of Limbdi, Wadhwan, Chuda, Sayla, and Than-Lakhtar in Kathiawar are offshoots from Dhrangadhra; His Highness the Maharana Shri Sir Ghanshyamsinhji, K.C.S.I., Maharaja Raj Saheb, is the ruling chief, who is the head of the Jhala Rajput family. The State pays a tribute of Rs. 40,671 to the British Government, and Rs. 4,006 to Junagadh State. The administration is conducted under the Maharaja's directions by the Dewan Rana Shri Mansinhji S. Jhala, C.I.E. The principal crops are cotton and grain. The Capital town is Dhrangadhra, a fortified town, 75 miles west of Ahmedabad.

Dhrangadhra State owns its railway from Wadhwan Junction to Halvad, a distance of 40 miles which is worked by the Bhavnagar State Railway on certain conditions.

Gondal State.—The Chief of Gondal is a Rajput of the Jadeja stock with the title of H. H. Thakore Sahib, the present Chief being H. H. Shri Bhagvat Sinhji, G.C.I.E. The early founder of the State, Kumbhoji I., had a modest estate of 20 villages. Kumbhoji II., the most powerful Chief of the House, widened the territories to almost their present limits by conquest; but it was left to the present ruler to develop its resources to the utmost, and in the words of Lord Reay, Governor of Bombay, by its "importance and advanced administration" to get it recognised as a First Class State. The State pays a tribute of Rs. 1,10,721. The chief products are cotton and grain and the chief manufactures are cotton and woollen fabrics and gold embroidery. Gondal has always been pre-eminent amongst the States of its class for the vigour with which public works have been prosecuted, and was one of the earliest pioneers of railway enterprise in Kathiawar, having initiated the Dhasa-Dhoraji line: it subsequently built other lines in partnership with other Native States in Kathiawar. There are no export and import dues, the people being free from taxes and dues. The Capital is Gondal, a fortified town on the line between Rajkot and Jetalsar.

Junagadh State.—This State has an area of 3,283 square miles and an average revenue of about 48 lakhs and is bounded on the north by the Bardas and Halar and on the west and south by the Arabian Sea. The river Saraswati, famous in the sacred annals of the Hindus, passes through the State. A sparsely wooded tract called the Gir, is contained in the State and is well known as the last haunt in India of the lion. Until 1472, when it was conquered by Sultan Mahmud Begra of Ahmedabad, Junagadh was a Rajput State, ruled by Chiefs of the Chudasama tribe. During the reign of the Emperor Akbar it became a dependency of Delhi, under the immediate authority of the Mughal Viceroy of Gujarat. About 1735, when the representative of the Mughals had lost his authority in Gujarat, Sher Khan Babi, a soldier of fortune, expelled the Mughal Governor, and established his own rule. The ruler of Junagadh first entered into engagements with the British Government in 1807. The Chief bears the title of Nawab, the present Nawab being tenth in succession from the founder of the family. He is His Highness Mahabat Khan, who was born in 1900 and succeeded in 1911. The agricultural products are cotton, shipped in considerable quantities from Veraval to Bombay, wheat and other grains. The coast line is well supplied with fair weather harbours. The State pays a tribute of Rs. 65,604 to the Gaekwar of Baroda and the British Government, but the Nawab receives contributions, called zortalbi, amounting to Rs. 92,421 from a number of chiefs in Kathiawar—a relic of the days of Mahomedan supremacy. The State maintains 100 Imperial Service Lancers. The Capital is Junagadh, situated under the Girnar and Datar hills, which is one of the most picturesque towns in India, while in antiquity and historical interest it yields to none. The Uparkot, or old citadel, contains interesting Buddhist caves, and the whole of the ditch and neighbourhood is honeycombed with caves or their remains. There are a number of fine modern buildings in the town.

Administrator: H. D. Rendall, I.C.S.

Navanagar State, on the southern shore of the Gulf of Cutch, has an area of 3,791 square miles. The Maharaja of Navanagar is a Jadeja Rajput by caste, and belongs to the same family as the Rao of Cutch. The Jadejas originally entered Kathiawar from Cutch, and dispossessed the ancient family of Jethwas (probably a branch of Jats) then established at Ghumli. The town of Navanagar was founded in 1540. The present Jam Sahib is the well-known cricketer, H. H. Jam Sahib Shri Ranjitsinhji Vibhaji, who was born in 1872 and succeeded in 1907. The principal products are grain and cotton, shipped from the ports of the State. A small pearl fishery lies off the coast. The State pays a tribute of Rs. 1,20,093 per annum jointly to the British Government, the Gaekwar of Baroda and the Nawab of Junagadh. The State maintains a squadron of Imperial Service Lancers. The Capital is Navanagar (or Jamnagar) a flourishing place, nearly 4 miles in circuit, situated 5 miles east of the port of Bedi. Population, 349,400. Revenue nearly Rs. 40 lakhs.

Dewan: K. B. Merwanji Pestonji.

Kolaba Agency.—This Agency includes the State of **Janjira** in the Konkan, a country covered with spurs and hill ranges and much intersected by creeks and backwaters. The ruling family is said to be descended from an Abyssinian in the service of one of the Nizam Shahi Kings of Ahmednagar at the end of the fifteenth century. The most noticeable point in its history is the successful resistance that it alone, of all the states of Western India, made against the determined attacks of the Marathas. The British on succeeding the Marathas as masters of the Konkan refrained

from interfering in the internal administration of the State. The chief is a Sunni Mahomedan, by race a Sidi or Abyssinian, with a title of Nawab. He has a sanad guaranteeing succession according to Mahomedan law and pays no tribute. Till 1868 the State enjoyed singular independence, there being no Political Agent, and no interference whatever in its internal affairs. About that year the maladministration of the chief, especially in matters of police and criminal justice, became flagrant; those branches of administration were in consequence taken out of his hands and vested in a Political Agent. The present ruler is H. H. Nawab Sidi Sir Ahmed Khan, G.C.I.E., who was born in 1862. The heir-apparent is Sidi Mahammad Khan, born on the 7th March 1914. The area of the State is 377 square miles, and the population 101,120. The average revenue is 6 lakhs. The State maintains an irregular military force of 246. The capital is Janjira, 44 miles south of Bombay Island. The Chief exercises full powers in Criminal Civil and Revenue matters of the State including Jafarabad, a dependency of the Janjira State in Kathiawar. He is entitled to a dynastic salute of 11 guns. In recognition of services rendered in connection with the war his salute was raised on the 1st January 1918 to 13 guns personal.

Kolhapur Agency.—Kolhapur is a State with an area of 3,217 square miles and population of 833,441. Subordinate to Kolhapur are nine feudatories, of which the following five are important: Vishalgarh, Bavda, Kagal (senior), Kapsi and Ichalkaranji. The present ruling chief Col. Sir Shahu Chhatrapati Maharaja, G.C.S.I., G.C.I.E., G.C.V.O., traces his descent from a younger son of Shivaji, founder of the Maratha power. The prevalence of piracy from the Kolhapur port of Malvan compelled the Bombay Government to send expeditions against Kolhapur in 1765, and again in 1792, when the Raja agreed to give compensation for the losses which British merchants had sustained since 1785, and to permit the establishment of factories at Malvan and Kolhapur. Internal dissensions and wars with neighbouring States gradually weakened the power of Kolhapur. In 1812 a treaty was concluded with the British Government, by which, in return for the cession of certain ports, the Kolhapur Raja was guaranteed against the attacks of foreign powers; while on his part he engaged to abstain from hostilities with other States, and to refer all disputes to the arbitration of the British Government. The principal articles of production are rice, jawar and sugar-cane and the manufactures are coarse cotton and woollen cloths, pottery and hardware. The State pays no tribute, and supports a military force of 690. The nine feudatory estates are administered by their holders. Except in the case of two whose holders are minors. Kolhapur proper is divided into five pethas or talukas and four mahals and is managed by the Maharaja, who has full powers of life and death. The Southern Mahratta Railway passes through the State and is connected with Kolhapur City by a line which is the property of the State.

Resident and Senior Political Agent for Kolhapur and the Southern Mahratta Country—Lt.-Col. F. W. Wodehouse, C.I.E.

Southern Maratha Country States.—The Agency consists of the following eight States:—

Name of State.	Area in square miles.	Population.	Tribute to British Government.	Average revenue.
			Rs.	Rs.
Sangl	1,112	227,146	1,35,000	10,75,756
Miraj (Senior)	339	80,281	12,557	3,12,980
Miraj (Junior)	210	36,490	7,388	2,55,263
Kurundwad (Senior)	185	38,375	....	1,54,369
Kurundwad (Junior)	114	34,084	9,618	1,73,669
Jamkhandi	524	100,304	20,515	9,41,105
Mudhol	368	62,831	2,671	3,52,916
Ramdrug	169	36,610	....	1,50,729
Total ..	3,021	616,121	1,87,749	34,16,787

Mahi Kantha.—This group of States has a total area of 3,124 square miles and a population of 412,631 including that of *Idar* which is 202,811. The revenue is about 14 lakhs. The Agency consists of the first class State of Idar and 51 small States. The Native State of Idar covers more than half the territory. It has an area of 1,669 square miles and an average revenue of Rs. 8,65,345; eleven other States are of some importance; and the remainder are estates belonging to Rajput or Koli Thakurs, once the lawless feudatories of Baroda, and still requiring the anxious supervision of the Political Officer. H. H. Major-General Sir Partab Singh, a Rajput of the Rathor Clan, having been appointed regent of the State of Jodhpur resigned the gadi of Idar in June 1911 and was succeeded by his adopted son Daulatsinhji who is aged 39. His Highness has been on active service. Many relatives of the Maharaja and feudal chiefs whose ancestors helped to secure the country for the present dynasty, now enjoy large estates on service tenures, and there are numerous petty chiefs or *bhumias* who have held considerable estates from the time of the Raos of Idar, or earlier, and are under no

obligation of service. The revenues of the State are shared by the Maharaja with these feudal chiefs. The Maharaja receives Rs. 52,427 annually on account of Khichdi and other Raj Haks from its subordinate Sardars, the tributory Talukas of the Mahi Kantha Agency and others, and pays Rs. 30,340 as tribute to the Gaekwar of Baroda through the British Government. The subordinate Sardars of Idar, known locally as pattawats, hold their estates on condition of military service, the quota being three horsemen for every 1,000 Rupees of Revenue; but for many years this service has not been exacted and no military force is maintained at present. The second class States are Polo, to the rulership of which the succession is disputed, and Danta, of which the ruler is Maharana Mamirsingji.

Political Agent—Lt.-Col. W. Beale.

Nasik Agency.—This consists of one State Surgana, lying in the north-west corner of the Nasik District. Surgana has an area of 360 square miles and a population of 15,180. The ruling chief is Prataprav Shankarrao Deshmukh, who is descended from a Maratha Sawar family. He rules the State subject to the orders of the Collector of Nasik. The revenue of the State is about Rs. 33,000.

Palanpur Agency.—This group of States in Gujarat comprises two first class States, Palanpur and Radhanpur, and a few minor States and petty talukas. Its total area is 3,393 square miles and the population is 515,092. The gross revenue is about 14½ lakhs. The territory included in the Agency has, like the core central parts of Gujarat, passed during historical times under the sway of the different Rajput dynasties of Anhilvada, the early Khilji and Tughlak Shahi dynasties of Delhi, the Ahmedabad Sultans, the Mughal Emperors, the Mahrattas, and lastly the British. The State from which the Agency takes its name is under the rule of H. H. Sir Taler Muhammad Khan, G.C.I.E., who is entitled Nawab and Dewan of Palanpur. He is descended from the Lohanis, an Afghan tribe who appeared in Gujarat in the fourteenth century. The connection of the British Government with the State dates from 1819 in which year the Chief was murdered by a body of nobles. Two High roads from Ahmedabad pass through the State and a considerable trade in cotton cloth, grain, sugar and rice is carried on. The State maintains a constabulary force of 600 and pays tribute of Rs. 38,000 to the Gaekwar of Baroda. The capital is Palanpur, situated at the junction of the Palanpur-Deesa Branch of the B. B. & C. I. Railway. It is a very old settlement of which mention was made in the 14th century.

Political Agent—Lt.-Col. N. S. Coghill.

Radhanpur is a State, with an area of 150 square miles, which is held by a branch of the Babi family, who since the reign of Humayun have always been prominent in the annals of Gujarat. The present chief is H. H. Jalaluddin Khanji, the Nawab of Radhanpur. He has powers to try his own subjects even for capital offences without permission from the Political Agent. The State maintains a military force of 200. The principal products are cotton, wheat and grain. The capital is Radhanpur town, a considerable trade centre for Northern Gujarat and Cutch.

Rewa Kantha Agency.—This Agency, with an area of 4,956 square miles and a population of 665,099, comprises 61 States, of which Rajpipla is a first class State, 5 are second class, one is third class and the rest are either petty States or talukas. Among those petty States are Sanjeli in the north, Bhadarva and Umeta in the west, Narukot in the south-east and two groups of Mehwas. The 26 Sankheda Mehwas petty estates lie on the right bank of the Narbada, while the 24 Pandu Mehwas petty estates including Dorka, Anghad and Raika, which together form the Dorka Mehwas are situated on the border of the Mahi.

The following are the statistics of area and population for the principal States :—

State.	Area in square miles.	Population.
Balasinor	189	40,563
Bariya	813	115,350
Chhota Udaipur	873	103,639
Lunavada	388	75,998
Narukot (Jambhughoda) ..	143	8,485
Rajpipla	1,517	161,588
Suntb	394	59,350
Other Jurisdictional States, Civil Stations and Thana Circles	639	100,126

Under the first Anhilvada dynasty (746-961), almost all the Rewa Kantha lands except Champaner were under the government of the Bariyas, that is, Koli and Bhil chiefs. In the eleventh, twelfth and thirteenth centuries chiefs of Rajput or part Rajput blood, driven south and east by the pressure of Muhammadan invasions, took the place of the Koli and Bhil leaders. The first of the present States to be established was the house of the Raja of Rajpipla.

Political Agent—W. W. Smart, I.C.S.

Rajpipla,—This State lies to the south of the Narbada. It has an area of 1,517 square miles, and largely consists of the Rajpipla Hills which form the watershed between the Narbada and Tapti rivers. The family of the Raja of Rajpipla, H. H. Maharana Shri Vijayasinhji is said to derive its origin from a Rajput of the Gohel clan. The State pays an annual sum of Rs. 50,000 on account of Ghasdana to the Gaekwar of Baroda. Cotton is the most important crop in the State. In the south there are valuable teak forests. The capital is Nandod, which is connected with Anklesvar by railway built by the State.

Satara Jagirs.—Under this heading are grouped the following six States :—

State.	Area in sq. miles.	Population.	Revenue in lakhs.
Aundh	501	68,995	3
Phaltan	397	55,996	2
Bhor	925	144,601	5
Akalkot	498	89,082	4
Jath	884	69,810	2
Daphlapur	96	8,833	·20

These were formerly feudatory to the Raja of Satara. In 1849 five of them were placed under the Collector of Satara, and Akalkot under the Collector of Sholapur. Subsequently, the Jagir of Bhor was transferred to the Collector of Poona and Jath and Daphlapur to the Southern Mahratta country. The last two are now under the Collector of Bijapur. The ruling chiefs are as follows :—

State.	Ruling Chiefs.	Tribute to British Government.
		Rs.
Aundh ..	Bhavanrav Shrinivasrao *alias* Baba Saheb, Pant Pratinidhi.	....
Phaltan ..	Mudhojirav Janrav Nimbalkar	9,600
Bhor ..	H. H. Shankarrav Chimnaji, Pant Sachiv	4,684
Akalkot ..	Fatehsinh Shahai Raje Bhonsle *alias* Bapu Saheb	14,592
Jath ..	Ramrav Amritrav *alias* Aba Saheb Daphle	6,400
Daphlapur ..	Rani Bai Saheb Daphle, widow of Ramchandrarav Venkatrav Chavan Daphle.	....

Savantwadi.—This State has an area of 925 square miles and population of 217,240. The average revenue is 5¼ lakhs. It lies to the north of the Portuguese territory of Goa, the general aspect of the country being extremely picturesque. Early inscriptions take the history of the State back to the sixth century. So late as the nineteenth century the ports on this coast swarmed with pirates and the country was very much disturbed. The present chief is Khem Savant V, *alias* Bapu Saheb Bhonsle. Rice is the principal crop of the State, and it is rich in valuable teak. The sturdy Marathas of the State are favourite troops for the Indian Army and supply much of the immigrant labour in the adjacent British districts. The Capital is Savantvadi, also called Sundar Vadi, or simply Vadi.

Sholapur Agency.—This contains the State of Akalkot which forms part of the tableland of the Deccan. It has an area of 498 square miles and a population of 89,082. In the beginning of the eighteenth century the Akalkot territory, which had formerly been part of the Mussulman kingdom of Ahmednagar was granted by the Raja of Satara to a Maratha Sardar, the ancestor of the present chief, subject to the supply of a contingent of horse. In 1849 after the annexation of Satara, the Akalkot Chief became a feudatory of the British Government.

Baria.—The State has an area of 813 square miles and is situated in the heart of the Panchmahals district. The Capital Devgad Baria is reached by a pucca road from Piplod station on the B. B. & C. I. Railway, at a distance of eight miles. The average revenue of the State is about 8 lacs. The State enjoys plenary powers. The Ruler Captain Maharaol Shree Ranjitsinhji belonging to the House of the renowned Prithiraj Chohan and descended from Patai Raol the last Rajput king of Gujrat has seen active service in the present war, and has munificently assisted Government in men and money. The staple crop is maize. The forests are rich in teak wood and all sorts of Jungle produce. There is a glass flourishing industry within the State. There is a large scope for forest industries.

The Sukkur Agency.—This consists of the Khairpur State, a great alluvial plain in Sind. It has an area of 6,050 square miles and a population of 223,788, and revenue of over 20 lakhs, 59 thousands. The present chief, H. H. Mir Sir Imam Buksh Khan Talpur, G.C.I.E., belongs to a Baloch family called Talpur. Previous to the accession of this family on the fall of the Kalhora dynasty of Sind in 1783, the history of Khairpur belongs to the general history of Sind. In that year Mir Fateh Ali Khan Talpur established himself as Rais or ruler of Sind ; and subsequently his nephew, Mir Sohrab Khan Talpur, founded the Khairpur branch of the Talpur family. In 1832 the individuality of the Khairpur State as separate from the other Talpur Mirs in Sind was recognised by the British Government by a treaty, under which the use of the river Indus

and the roads of Sind were secured to the British. The chief products of the State are oil-seeds, ghee, hides, tobacco, fuller's earth, carbonate of soda, cotton, wool and grain. The manufactures comprise cotton fabrics and various kinds of silverware and metal work. There is an industrial school at the capital where lacquer work, carpets, pottery, etc., are produced. The Railway from Hyderabad to Rohri runs through the whole length of the State. The rule of the Mir is patriarchal, but many changes have been made in recent years introducing greater regularity of procedure into the administration. The Wazir, an officer lent from British service, conducts the administration under the Mir. The State supports a military force of 564 including an Imperial Service Camel and Baggage Corps which is 139 strong and is serving at the front.

Political Agent: Otto Rothfield, I.C.S.

Surat Agency.—This is a small group of three second class States under the superintendence of the Collector of Surat, A. E. L. Emanuel, I.C.S.

State.	Ruling Chiefs.	Area in sq. miles.	Population.
Dharampur ..	Maharana Shri Mohandevji Narayandevji..	704	114,995
Bansda ..	Maharaval Shri Indrasinhji Pratapsinhji	215	44,594
Sachin ..	Nawab Sidi Ibrahim Muhammad Yakut Khan Mubazarat Daula Nasrat Jung Bahadur.	42	18,903

The joint revenue of these states is 16½ lakhs. Tribute is paid to the British Government of Rs. 9,154. There is also attached to this Agency a tract of country known as the Dangs, which has an area of 999 square miles and a population of 29,353 and a revenue of Rs. 30,000, The country is divided into 14 Dangs or States of very unequal area, each under the purely nominal rule of a Bhil Chief with the title of Raja, Naik, Pradhan or Powar.

Thana Agency.—This includes the State of Jawhar, in the Thana District, on a plateau above the Konkan plain. It has an area of 310 square miles and a population of 53,489 and revenue of 2½ lakhs. Up to 1294, the period of the first Mahomedan invasion of the Deccan, Jawhar was held by a Varli, not a Koli chief. The first Koli chief, obtained his footing in Jawhar by a device similar to that of Dido, when she asked for and received as much land as the hide of a bull would cover. The Koli chief cut a hide into strips, and thus enclosed the territory of the State. The present chief is Raja Vikramshah Patangshah who administers the State, assisted by a Karbhari under the supervision of the Collector of Thana, Mr. G. L. MacGregor, I.C.S., who is Political Agent of the State.

UNDER THE GOVERNMENT OF BENGAL.

Cooch Behar.—This State, which at one time comprised almost the whole of the Northern Bengal, Assam and Bhutan, is a low-lying plain in North Bengal. It has an area of 1,307 square miles, a population of 593,052 and revenue of nearly 30 lakhs. The ruling chief is H. H. Maharaja Jitendra Narayan Bhup Bahadur who married Rani Indira Debi, eldest daughter of H. H Maharaja Rao Gaekwar of Baroda in 1913 and succeeded his brother Maharaja Raj Rajendra Narayan in the same year. His family is according to some ethnologists of either Dravidian or Mongolian origin or a mixture of both types, but according to others of Kshatriya origin. H. H. administers the State with the assistance of the State Council of which he is President. Cooch Behar once formed part of the famous kingdom of Kamrup. British connection with it began in 1772 when owing to inroads of the Bhuteas, the assistance of the East India Company was invited. The chief products of the State are rice, jute and tobacco. The capital is Cooch Behar, which is reached by the Cooch Behar State Railway, a branch from the Eastern Bengal State Railway system.

Hill Tippera.—This State lies to the east of the district of Tippera and consists largely of hills covered with dense jungles. It has an area of 4,086 square miles and a population of 229,613. The revenue from the State is about 11 lakhs and from the Zemindari in British territory a slightly smaller sum. The present Raja is Birendra Kishore Deb Barman Manikya, who is a Kshatriya by caste and comes of the Lunar race and is entitled to a salute of 13 guns. The military prestige of the Tippera Rajas dates back to the fifteenth century and a mithical account of the State takes the history to an even earlier date. Both as regards its constitution and its relations with the British Government, the State differs alike from the large Native States of India, and from those which are classed as tributary. Besides being the ruler of Hill Tippera, the Raja also holds a large landed property situated in the plains of the Districts of Tippera, Naokhali and Sylhet. This estate covers an area of 600 square miles, and is held to form with the State an indivisible Raj. Disputes as to the right of succession have occurred on the occasion of almost every vacancy in the Raj, producing in times gone by disturbances and domestic wars, and exposing the inhabitants of the hills to serious disorders and attacks from the Kukis, who were always called in as auxiliaries by one or other of the contending parties. The principles which govern succession to the State have recently, however, been embodied in a sanad which was drawn up in 1904. The chief products of the State are rice, cotton, *til* and forest produce of varions kinds, the traffic being carried chiefly by water. The administration is conducted by the Chief Dewan at Agartala, the Capital, assisted by two assistants.

Political Agent: J. Bartley, I.C.S.

UNDER THE GOVERNMENT OF BIHAR AND ORISSA.

Under this Government there are the Chota Nagpur political States of Kharsawan and Seraikela, and the Orissa feudatory States, 24 in number. The total area is 28,648 square miles, and the total population 3,942,972. The revenue is about 70 lakhs. The inhabitants are hill-men of Kolarian or Dravidian origin, and their condition is still very primitive. The chief of **Kharsawan** belongs to a junior branch of the Porahat Raja's family. The State first came under the notice of the British in 1793, when, in consequences of disturbances on the frontier of the old Jungle Mahals, the Thakur of Kharsawan and the Kunwar of Saraikela were compelled to enter into certain agreements relating to the treatment of fugitive rebels. The chief is bound, when called upon, to render service to the British Government, but he has never had to pay tribute. His present sanad was granted in 1899. He exercises all administrative powers, executive and judicial, subject to the control of the Deputy Commissioner of Singhbhum and the Commissioner of Chota Nagpur. The Bengal Nagpur Railway runs through a part of the State. The adjoining State of Seraikela is held by the elder branch of the Porahat Raja's family.

Orissa Feudatory States.—This group of 24 dependent territories is situated between the Mahanadi Delta and the Central Provinces, and forms the mountainous background of Orissa. The names of the individual States are Athgarh, Talcher, Mayurbhanj, Nilgiri, Keonjhar, Pal Lahara, Dhenkanal, Athmallik, Hindol, Narsinghpur, Baramba, Tigiria, Khandpara, Nayagarh, Ranpur, Daspalla and Baud. To these there were added in 1905 the following States: Bamra, Rairakhol, Sonpur, Patna and Kalahandi from the Central Provinces, and Gangpur and Bonai from the Chota Nagpur States. The total population in 1915 was 3,798,038 with a revenue of about 60 lakhs. The Feudatory States have no connected or authentic history. Comprising the western and hilly portion of the province of Orissa they were never brought under the central government, but from the earliest times consisted of numerous petty principalities which were more or less independent of one another. They were first inhabited by aboriginal races, who were divided into innumerable communal or tribal groups each under its own chief or headman. These carried on incessant warfare with their neighbours on the one hand and with the wild beasts of the forests on the other. In course of time their hill retreats were penetrated by Aryan adventurers, who gradually overthrew the tribal chiefs and established themselves in their place. Tradition relates how these daring interlopers, most of whom were Rajputs from the north, come to Puri on a pilgrimage and remained behind to found kingdoms and dynasties. It was thus that Jai Singh became ruler of Mayurbhanj over 1,300 years ago, and was succeeded by his eldest son, while his second son seized Keonjhar. The chiefs of Baud and Daspalla are said to be descended from the same stock; and a Rajput origin is also claimed by the Rajas of Athmallik, Narsinghpur, Pal Lahara, Talcher and Tigiria. Nayagarh, it is alleged, was founded by a Rajput from Rewah, and a scion of the same family was the ancestor of the present house of Khandpara. On the other hand, the chiefs of a few States, such as Athgarh, Baramba and Dhenkanal, owe their origin to favourites or distinguished servants of the ruling sovereigns of Orissa. The State of Ranpur is believed to be the most ancient, the list of its chiefs covering a period of over 3,600 years. It is noteworthy that this family is admittedly of Khond origin, and furnishes the only known instance in which, amid many vicissitudes, the supremacy of the original settlers has remained intact. The States acknowledged the suzerainty of the paramount power and were under an implied obligation to render assistance in resisting invaders; but in other respects neither the ancient kings of Orissa nor their successors, the Mughals and Marathas, ever interfered with their internal administration. All the States have annals of the dynasties that have ruled over them; but they are made up in most part of legend and fiction and long genealogical tables of doubtful accuracy, and contain very few features of general interest. The British conquest of Orissa from the Marathas, which took place in 1803, was immediately followed by the submission of ten of the Tributary States the chiefs of which were the first to enter into treaty engagements.

The States have formed the subject of frequent legislation of a special character. They were taken over from the Marathas in 1803 with the rest of Orissa; but, as they had always been tributary states rather than regular districts of the native governments they were exempted from the operation of the general regulation system. This was on the ground of expediency only and it was held that there was nothing in the nature of British relations with the proprietors that would preclude their being brought under the ordinary jurisdiction of the British courts, if that should ever be found advisable. In 1882 it was held that the States did not form part of British India and this was afterwards accepted by the Secretary of State.

The staple crop in these States is rice. The forests in them were at one time among the best timber producing tracts in India, but until lately forest conservancy was practically unknown. The States have formed the subject of frequent legislation of a special character. The relations with the British Government are governed mainly by the sanads granted in similar terms to all the chiefs in 1894. They contain ten clauses reciting the rights, privileges, duties and obligations of the chiefs providing for the settlement of boundary disputes, and indicating the nature and extent of the control of the Political Agent.

Political Agent: L. E. B. Cobden-Ramsay, C.I.E., I.C.S.

UNDER THE GOVERNMENT OF THE UNITED PROVINCES.

Three States: Rampur, Tehri and Benares are included under this Government:—

State.	Area Sq. Miles.	Population.	Revenue in lakhs.
Rampur ..	892	531,898	45
Tehri (Garhwal)	4,200	299,853	6
Benares ..	988	....	....

Rampur is a fertile level tract of country. The ruler Colonel His Highness Alijah Farzandi-i-Dilpizir-i-Daulet-i-Inglishia, Mukhlie-ud-Daulah, Nasr-ul Mulk, Amir-ul-Umara, Nawab Sir Syed Mohammed Hamid Ali Khan Bahadur Mustaid Jang, G.C.I.E., G.C.V.O., A.D.C., to His Imperial Majesty the King Emperor. Born 31st August 1875, descended from the famous Sadats of Bahera. Succeeded in February 1889. His Highness is the sole surviving representative of the once great Rohilla power in India. He is the Premier Chief in the United Provinces, and rules over a territory of 892 square miles with a population of 531,217. His Highness is an enlightened Prince and is well educated in Arabic, Persian and English languages. He is a keen supporter of education for Mohammedans, and has travelled extensively in America and Europe. During the Mutiny of 1857 the then Nawab of Rampur displayed his unswerving loyalty to the British Government by affording pecuniary aid, protecting the lives of Europeans, and rendering other valuable services which were suitably recognised by the Paramount power. This State contributes towards the defence of the Indian Empire by maintaining a well-equipped and well trained battalion of Imperial Service Infantry and a cavalry unit consisting of two squadrons.

The Imperial Service Infantry has served at the Front and a detachment of Imperial Service Lancers is training Government horses at the Remount Depot, Aurangabad.

His Highness has 3 sons, the eldest Sahibzada Syed Raza Ali Khan Bahadur being the heir apparent.

The State has an income of over £300,000 (three hundred thousand pounds) a year.

Tehri State (or Tehri Garhwal).—This State lies entirely in the Himalayas and contains a tangled series of ridges and spurs radiating from a lofty series of peaks on the border of Tibet. The sources of the Ganges and the Jumna are in it. The early history of the State is that of Garhwal District, the two tracts having formerly been ruled by the same dynasty. Parduman Shah, the last Raja of the whole territory, was killed in battle, fighting against the Gurkhas; but at the close of the Nepalese War in 1815, his son received from the British the present State of Tehri. During the Mutiny the latter rendered valuable assistance to Government. He died in 1859 without issue, and was succeeded by his near relative Bhawani Shah; and he subsequently received a sanad giving him the right of adoption. The present Raja Lt. H. H. Narendra Shah Bahadur is a minor and is being educated at the Mayo College. The principal product is rice, grown on terraces on the hill sides. The State forests are very valuable and there is considerable export of timber. The Raja has full powers within the State. A unit of Imperial Service Sappers is maintained. The capital is Tehri, the summer capital being Pratapnagar 8,000 feet above the sea level.

Political Agent: the Commissioner of Kumaon.

Benares.—The founder of the ruling family of Benares was one Mansa Ram, who entered the service of the Governor of Benares under the Nawab of Oudh in the early eighteenth century. His son, Balvant Singh, conquered the neighbouring countries and created a big state out of them over which he ruled till 1770. Raja Chet Singh succeeded him, but was expelled by Warren Hastings in 1781. In 1794, owing to the mal-administration of the estates which had accumulated under the Raja of Benares, an agreement was concluded by which the lands held by the Raja in his own right were separated from the rest of the province, of which he was simply administrator. The direct control of the latter was assumed by the Government, and an annual income of one lakh of rupees was assured to the Raja, while the former constituted the Domains. Within the Domains the Raja had revenue powers similar to those of a Collector in a British District, which were delegated to certain of his own officials. There was thus constituted what for over a century was known as the Family Domains of the Maharaja of Benares. On the 1st of April 1911 these Domains became a State consisting of the parganas of Bhadohi (or Konrh) and Chakia (or Kera Mangraur) with the fort of Ramnagar. The Maharaja's powers are those of a ruling chief, subject to certain conditions, of which the most important are the maintenance of all rights acquired under laws in force prior to the transfer, the reservation to Government of the control of the postal and telegraph systems, of plenary criminal jurisdiction within the State over servants of the British Government and European British subjects, and of a right of control in certain matters connected with excise. The present ruler is H. H. Maharaja Sir Prabhu Narayan Singh Bahadur, G.C.I.E., who was born in 1855 and succeeded to the State in 1889.

UNDER THE GOVERNMENT OF THE PUNJAB.

Under this Government there are 34 states, varying considerably in size and importance. Area, 36,532 square miles. Population (1911), 4,212,794. Revenue, about £1,000,000.

The Punjab states may be grouped under three main classes. The hill States, 23 in number, lie among the Punjab Himalayas and are held by some of the most ancient Rajput families in all India. Along the western half of the southern border lies the Muhammadan state of Bahawalpur. The remaining States, including the Sikh principalities of Patiala, Jind, Nabha, Kapurthala, Faridkot and Kalsia, and the Muhammadan chiefships of Maler Kotla, Pataudi, Loharu and Dujana, lie east of Lahore, and, with insignificant exceptions, occupy the centre of the eastern plains of the province

The list below gives details of the area, population, and revenue of the more important states :—

Name.	Area square miles.	Population.	Revenue Approx. in lakhs.
Bahawalpur ..	15,000	780,394	27
Chamba ..	3,216	134,351	7
Faridkot ..	642	130,374	8
Jind ..	1,259	271,728	15
Kapurthala ..	630	268,244	25
Maler Kotla ..	167	71,144	14½
Mandi ..	1,200	181,110	5
Nabha ..	928	248,892	15
Patiala ..	5,412	1,407,659	72
Sirmur (Nahan)..	1,198	138,564	8

Bahawalpur.—This State, which is about 300 miles in length and about 40 miles wide, is divided lengthwise into three great strips. Of these, the first is a part of the Great Indian Desert; the central tract is chiefly desert, not capable of cultivation, identical with the Bar or Pat uplands of the Western Punjab; and the third, a fertile alluvial tract in the river valley, is called the Sind. The ruling family claims descent from the Abbaside Khalifas of Egypt. The tribe originally came from Sind, and assumed independence during the dismemberment of the Durrani empire. On the rise of Ranjit Singh, the Nawab made several applications to the British Government for an engagement of protection. These, however, were declined, although the Treaty of Lahore in 1809, whereby Ranjit Singh was confined to the right bank of the Sutlej, in reality effected his object. The first treaty with Bahawalpur was negotiated in 1833, the year after the treaty with Ranjit Singh for regulating traffic on the Indus. It secured the independence of the Nawab within his own territories, and opened up the traffic on the Indus and Sutlej. During the first Afghan War the Nawab rendered assistance to the British and was rewarded by a grant of territory and life pension. On his death the succession was disputed and for a time the State was in the hands of the British. The present Nawab is H. H. Nawab Sadiq Muhammad Khan, who was born in 1904 and succeeded in 1907. During his minority the State is managed by a Council of Regency. The chief crops are wheat, rice and millet. The Lahore-Karachi branch of the North-Western State Railway passes through the State. The State supports an Imperial Service Silladar Camel Transport Corps consisting of 355 men and 1,144 camels, in addition to other troops. The capital is Bahawalpur, a walled town built in 1748.

Political Agent: W. C. Renouf, I.C.S.

Chamba.—This State is enclosed on the west and north by Kashmir, on the east and south by the British districts of Kangra and Gurdaspur, and it is shut in on almost every side by lofty hill ranges. The whole country is mountainous and is a favourite resort of sportsmen. It possesses a remarkable series of copper plate inscriptions from which its chronicles have been completed.

Founded probably in the sixth century by Marut, a Surajbansi Rajput, who built Brahmapura, the modern Barmaur, Chamba was extended by Meru Varma (680) and the town of Chamba built by Sahil Varma about 920. The State maintained its independence, until the Mogha! conquest of India.

Under the Moghals it became tributary to the empire, but its internal administration was not interfered with, and it escaped almost unscathed from Sikh aggression. The State first came under British influence in 1846. The part, west of the Ravi, was at first handed over to Kashmir, but subsequently the boundaries of the State were fixed as they now stand, and it was declared independent of Kashmir. The present chief is H. H. Raja Sir Bhure Singh, K.C.S.I., K.C.I.E., who was born in 1869, and succeeded in 1904. The principal crops are rice, maize and millets. There are some valuable forests which were partly leased to Government in 1864 for a term of 99 years, but the management of them has now been retroceded to the Chamba Durbar. The mountain ranges are rich in minerals which are little worked. The principal road to Chamba town is from Pathankot, the terminus of the Amritsar Pathankot branch of the North-Western Railway. The Raja is the head of the judicial department and is assisted by the Wazir-i-Wazarats, Chamba town, on the right bank of the Ravi, contains a number of interesting temples, of which that of Lakshmi Narayan, dating possibly from the tenth century, is the most famous.

Faridkot.—The ruling family of this sandy level tract of land belongs to the Sidhu Barar clan of the Jats, and is descended from the same stock as the Phulkian houses. Their occupation of Faridkot and Kot Kapura date from the time of Akbar, though quarrels with the surrounding Sikh States and internal dissensions have greatly reduced the patrimony.

The present chief, Major H. H. Maharaj Brij Indar Singh Bahadur was born in 1899 and ascended the Rajgadi on 15th March 1906 and commenced exercising full Ruling powers from 24th November 1916. His Highness was brought up in the Aitchison Chiefs' College. During his minority the administration was carried on by a Council of Regency. His Highness has three Secretaries to assist him in running the administration of his State. The State has one company of Imperial Service Sappers.

Jind.—The three Native States of Jind, Patiala and Nabha form collectively the Phulkian States, the most important of the Cis-Sutlej States. This area is the ancestral possession of the Phulkian houses. It lies mainly in the great natural tract called the Jangal (desert or forest), but stretches north-east into that known as the Pawadh and southwards across the Ghaggar into the Nardak, while its southernmost tract, round the ancient town of Jind, claims to lie within the sacred limits of Kurukshetra. This vast tract is not, however, the exclusive property of the States; for in it lie several islands of British territory, and the State of Maler Kotla enters the centre of its northern border. On the other hand, the States hold many outlying villages surrounded by British territory.

The history of Jind as a separate State dates from 1763 when the confederated Sikhs captured Sirhind town and partitioned the whole Jind Province. The Maharaja of Jind, H. H. Maharaja Sir Ranbir Singh, G.C.I.E, K.C.S.I., was born in 1879 and succeeded in 1887. He is descended from the ancestors of the Phulkian family. During the Sikh War and the Mutiny the Raja of Jind was of great service to the British and was rewarded with a grant of nearly 600 square miles of land. The principal crops are wheat, barley and gram. The only industries of importance are the manufactures of gold and silver ornaments, leather and woodwork and cotton cloth. The capital is Sangrur which is connected by a State Railway with the North-Western Railway. Under His Highness' Court there is a Council Wizarat which controls all the departments of the State.

Kapurthala.—This State consists of three detached pieces of territory in the great plain of the Doab. The ancestors of the chief of Kapurthala at one time held possessions both in the Cis and Trans-Sutlej and also in the Bari Doab. In the latter lies the village of Ahlu, whence the family springs, and from which it takes the name of Ahluwalia. Some of these estates were confiscated after the first Sikh War and when the Jullundur Doab came under the dominion of the British Government in 1846, the estates north of the Sutlej were maintained in the independent possession of the Ahluwalia chieftain, conditional on his paying a commutation in cash for the service engagements by which he had previously been bound to Ranjit Singh. The Bari Doab estates have been released to the head of the house in perpetuity, the civil and police jurisdiction remaining in the hands of the British authorities. For good services during the Mutiny, the Raja was rewarded with a grant of other States in Oudh in which, however, he exercises no ruling powers, though in Oudh he is, to mark his superiority, addressed as Raja-i-Rajagan. The present chief is H. H. Maharaja Sir Jagatjit Singh Bahadur, G.C.S.I., who was born in 1872 and succeeded in 1877. He was granted the title of Maharaja as an hereditary distinction in 1911. The chiefs of Kapurthala are Sikhs. Sardar Jassa Singh was always known as Jassa Kalal; but the family claim descent from Rana Kapur, a semi-mythical member of the Rajput house of Jaisalmer, who is said to have left his home and founded Kapurthala 900 years ago. Only a small proportion of the population however are Sikhs, the majority being Mahomedans. The chief crops are wheat, gram, maize, cotton and sugar-cane. The town of Sultanpur in this State is famous for hand-painted cloths. The main line of the North-Western Railway passes through part of the State and the Grand Trunk Road runs parallel to it. A branch railway from Jullundur City to Ferozepur passes through the State. Kapurthala maintains a battalion of Imperial Service infantry and a small force of local troops. The capital is Kapurthala, which is said to have been founded in the eleventh century.

Agent to the Lieutenant-Governor for Kapurthala, the Commissioner of the Jullunder Division.

Maler Kotla.—This State consists of a level sandy plain bounded by the district of Ludhiana on the north and by Patiala territory elsewhere. The Nawabs of Maler Kotla are of Afghan descent, and originally held positions of trust in the Sirhind province under the Moghal Emperors. As the Empire sank into decay during the eighteenth century, the local chiefs gradually became independent. The result was constant feuds with the adjacent Sikh States. After the victory of Laswari, gained by the British over Sindhia in 1803, and the subjugation and flight of Holkar in 1805, when the Nawab of Maler Kotla joined the British army, the British Government succeeded to the power of the Marathas in the districts between the Sutlej and the Jumna. The final treaty which affirmed the dependence of the State on the British Government was signed after the submission of Ranjit Singh in 1809. The present Nawab is H. H. Nawab Ahmud Ali Khan Bahadur, K.C.S.I., who was born in 1881 and succeeded in 1908. He was created Hon. Major in the Indian Army for his services during the war. The chief products are cotton, sugar and opium. The State supports two double companies of Imperial Service Sappers. The capital is Maler Kotla. Revenue 14½ lakhs.

Mandi.—This is a mountainous State in the upper reaches of the Beas. It has a history of considerable length, as it once formed part of the Suket State. Its relations with the British were determined after the battle of Sobraon in 1846. The present minor Chief H. H. Raja Jogindra Sen was installed in 1913. The administration is carried on by Mr. J. R. S. Parsons, I.C.S., the Superintendent, and Mahta Ganda Mal, Assistant Superintendent. The principal crops are rice, maize, wheat and millet. About three-fifths of the State are occupied by forest and grazing lands. It is rich in minerals. The capital is Mandi, founded in 1527, which contains several temples and other buildings of interest and is one of the chief marts for commerce with Ladakh and Yarkhand.

Nabha.—Nabha which became a separate State in 1763 is one of the 3 Phulkian States—Nabha, Patiala and Jind and though second in point of population and revenue of the 3 sister States, it claims seniority being descended from the eldest branch. It consists of two distinct parts, the main portion comprising 12 separate pieces of territory scattered among the other Punjab States and Districts, forms the City of Nabha and the *Nizamats* of Phul

and Amloh; the second portion forms the *Nizamat* of Bawal in the extreme south-east of the Punjab on the border of Rajputana: this Nizamat of Bawal was subsequently added to its territory as a reward from the British Government for the loyalty of the Rulers of Nabha. The State now covers an area of about 1,000 square miles and has a population of about 3 lakhs. The present Ruler is Shri Maharaja Ripudaman Singhji Malavendra Bahadur, who was born in 1883 and succeeded his father in 1911. The administration of the State is carried on by His Highness the Maharaja assisted by a Council of Ministers. The High Court is the head of the Judicial Department. The State supports one battalion of Imperial Service Infantry consisting of 600 men; besides this there are local forces of Infantry, cavalry and artillery, etc., consisting of about 1,000 men all told and also a Transport Corps. For the preservation of the peace there is a Police force consisting of about 600 men.

The State is traversed by the main and 3 branch lines of the N. W. Railway and the Rajputana Malwa Railway crosses the *Nizamat* of Bawal. A large portion of the State is irrigated by the Sirhind Canal. The crops of the State are gram, pulses, bajra, sugarcane, cotton, wheat and barley; to facilitate trade the Darbar has opened grain markets and Banks near the principal railway stations within the State territory; The chief industries of the State consists of the manufacture of silver and gold ornaments, brass utensils, and cotton carpets, lace and *gota*, etc. There are some ginning factories and a cotton steam press in the State which are working successfully. The State has so far contributed roughly about 30 lakhs of rupees to the various funds in connection with the War, including a fully equipped Hospital Ship for Mesopotamia, people of the State have subscribed about 7 lakhs to the Indian War Loan.

Patiala.—This is the largest of the Phulkian States, and the premier State in the Punjab. Its territory is scattered and interspersed with small estates and even single villages belonging to other States and British districts. It also comprises a portion of the Simla Hills and territory on the border of Jaipur and Alwar States. Area 5,951 square miles. Population 1,407,659. Its history as a separate state begins in 1762. During the Sikh war and the Mutiny the Maharaja was loyal and was substantially rewarded. The present Ruler His Highness Farzand-i-Khas Daulat-i-Inglishia Mansur-i-Zaman Amir-ul-Umra Maharaja Dhiraj Rajeshwar Sri Maharaja-i-Rajgan Major General Sir Bhupinder Singh Mahinder Bahadur, G.C.I.E., G.B.E., was born in 1891 and succeeded in 1909. During his minority his administrative functions were exercised by a Council of Regency consisting of three members. The principal crops are gram, barley and wheat. cotton and tobacco are also grown in parts of the state. A great part of the state is irrigated by the Sirhind and Western Jumna Canal distributaries. It possesses valuable forests. The State is rich in antiquities, especially at Pinjaur, Sunam and Sirhind. The North-Western Railway, the E. I. Railway. and a branch of the B. B. and C. I. Railway traverse the state. It contains an Imperial Service contingent of a regiment of cavalry and two battalions of infantry. The State has besides these standing forces supplied British Government with two mule and one camel corps raised expressly for war exigencies. Also undertaken to raise three new battalions of full war strength. In 1900 it was decided by the Government of India to appoint a Political Agent for Patiala and the other two Phulkian States of Jind and Nabha were included in the Agency, to which was afterwards added the Mohammadan State of Bhawalpur, but a separate Agency has since been established for this last mentioned state. The Headquarters of the Agency are at Patiala. Gross income in round figures is 1,10,00,000 rupees per annum.

Sirmur (Nahan).—This is a hilly State in the Himalayas under the Political control of the Commissioner of Ambala Division. Its history is said to date from the 11th century. In the eighteenth century the State was able to repulse the Gurkha invasion, but in 1793 the Gurkhas were invited to aid in the suppression of an internal revolt in the State and they in turn had to be evicted by the British. In 1857 the Raja rendered valuable services to the British, and during the second Afghan War he sent a contingent to the North-West Frontier. The present Chief is H. H. Raja Amar Parkash Bahadur, K.C.S.I., who was born in 1888 and succeeded in 1911. The main agricultural feature of the State is the recent development of the Kiarda Dun, a fertile level plain which produces wheat, gram, rice, maize and other crops. The State forests are valuable and there is an iron foundry at Nahan which was started in 1867 but, being unable to compete with the imported iron, is now used for the manufacture of sugar-cane crushing mills. The State supports an Imperial Service Corps of Sappers and Miners which served in the Tirah Expedition of 1897 and has been serving in the war. It was captured with General Townshend's force at Kut-al-Amara but the Corps has since been re-constituted and has again gone on service.

UNDER THE GOVERNMENT OF BURMA.

Under this Government there are four Shan States, two in the Mandalay Division (Hkmati Long and Mong Mit); and two in the Sagaing Division (Hsawnghsup and Singkaling Hkmati), the area of which is 7,374 square miles and the population about 67,051, consisting chiefly of Buddhists. There are in addition 48 petty States, 5 in the Northern Shan States. 43 in the Southern Shan States, with an area of 58,835 square miles and a population of 1,358,498 consisting of Buddhists and Animists.

The Shan States—Though a portion of British India, do not form part of Burma proper and are not comprised in the regularly administered area of the Province. They lie for the most part to the east of Upper Burma. They owed allegiance to the Burmese Government, but were administered by their own rulers (Sawbwas) and the British Government has continued to a certain extent the semi-independence which it found existing in 1885. As at present defined, the Shan States are divided into—

1. States under the supervision of the Superintendent, Northern Shan States, whose headquarters are at Lashio; area 14,294 square miles and population 58,952.
2. States under the supervision of the Superintendent and Political Officer, Southern Shan States, whose headquarters are at Taunggyi; area 40,434 square miles and population 900,202.

There are five States in the Northern and 38 in the Southern Shan States. There are in addition two Shan States under the supervision of the Commissioner of the Mandalay Division, namely, Hkmati Long in the unadministered territory to the north of the Myitkyina District and Mong Mit lying north-east of the Ruby Mines District. In the north-west of the Upper Chindwin District towards Manipur there are two small Shan States, Hsawnghsup and Singkaling Hkamti, whose administration is supervised by the Commissioner of the Sagaing Division.

The Northern Shan States are North Hsenwi in the north, South Hsenwi near the Salween in the east, Manglon in the south-east, Hsipaw in the south-west, and Tawngpeng in the north-west. The Wa States east of the Salween can hardly be said to be under British control. In ordinary matters the States are administered by their Sawbwas, who are assisted by amats, or ministers, in various departments. The Superintendent exercises general control over the jurisdiction of justice and is vested with wide revisionary powers. In revenue matters the Sawbwas administer their States in accordance with local customs which have been but little modified. Of prime importance in the economy of the country is the Mandalay Lashio railway, 180 miles in length, of which 126 miles lie within the Northern Shan States. The line is a single track, and was constructed in the face of considerable engineering difficulties, of which not least the notable was the Gokteik gorge, now spanned by a viaduct. It had been proposed to continue the railway about 90 miles farther east to the Kunlong, where is a ferry over the Salween, and eventually to penetrate into Yunnan: but this extension is for the present in abeyance.

The most important of the Southern Shan States are Kengtung and Yawnghwe. Under the supervision of the Superintendent and Political Officer and his Assistants, the chiefs—known as Sawbwas, Myozas, and Ngwegunhmus—control their own States, exercising revenue, civil and criminal jurisdiction therein. There are in all 9 Sawbwas, 18 Myozas and 11 Ngwegunhmus.

Karenni.—This district consists of five States, with a total area of approximately 4,200 square miles and a population of about 64,000, lying on the frontier south of the Shan States. The largest State is Kantarawadi with an area of 3,000 square miles, a population of nearly 40,000, and a gross revenue of about 1¼ lakhs of rupees. More than half of the inhabitants belong to the Red Karens, a people low in the scale of civilisation. An Assistant Political Officer is posted at Loikaw as Agent of the British Government, and a certain amount of control is exercised through him over the chiefs. The principal wealth of the country is teak timber, and the considerable alien population is largely supported by the timber trade, which, however, has declined greatly in the last few years. The Karens themselves are distinguished as hunters.

UNDER THE GOVERNMENT OF ASSAM.

The only State of importance under the Chief Commissioner of Assam is **Manipur,** which has an area of 8,456 square miles and a population of 346,222, of which about 60 per cent. are Hindus, and 36 per cent. animistic forest tribes. Manipur consists of a great tract of hilly country and a valley, about 30 miles long 20 miles wide, which is shut in on every side. The State adopted Hinduism in the early eighteenth century, when it came under a Naga Raja who subsequently made several invasions into Burma. On the Burmese retaliating, Manipur negotiated a treaty of alliance with the British, in 1762. The Burmese again invaded Manipur during the first Burmese War and on the conclusion of peace, in 1826, Manipur was declared independent. The chief event in its subsequent history was the intervention of the British in 1891 to establish the claim of Kula Chandra Singh as Maharaja, followed by the treacherous murder of the Chief Commissioner, Mr. Quinton and the officers with him and the withdrawal of the escort which accompanied him. From 1891 to 1908 the State was administered by a Political Agent and Superintendent of the State during the minority of H. H. Raja Chura Chand Singh. The Raja was invested with ruling powers in 1908. The administration of the State is now conducted by the Durbar, consisting of the Raja as President, a vice-president, a member of the Indian Civil Service whose services are lent to the State, three ordinary and three additional members who are all Manipuris. The staple crop of the country is rice. Forests of great variety cover the whole of the hill ranges.

Khasi and Jaintia Hills.—These petty chiefships, 25 in number, with a total area of about 3,900 square miles and a population of 126,000, are included under the Government of Assam. Most of the States have treaties or engagements with the British Government. The largest of them is Khyrim, the smallest is Nonglewai, which has a population of 169. Most of them are ruled by a chief or Siem. The Siemship usually remains in one family, but the succession was originally controlled

by a small electoral body constituted from the heads of certain priestly clans. Of recent years there has been a tendency to broaden the elective basis, and the constitution of a Khasi State has always been of a very democratic character, a Siem exercising but little control over his people. Among many of the north-east frontier tribes there is little security of life and property, and the people are compelled to live in large villages on sites selected for their defensive capabilities. The Khasis seem, however, to have been less distracted by internal warfare, and the villages, as a rule, are small.

UNDER THE GOVERNMENT OF THE CENTRAL PROVINCES.

The Central Provinces include fifteen feudatory States subordinate to the administration, with an area of 31,174 square miles and a population of 2,117,002. One of the States, Makrai, lies within Hoshangabad District; the remainder are situated in the Chhattisgarh Division, to the different districts of which they were formerly attached. Their relations with Government are controlled by a Political Agent. The States vary greatly in size and importance. Sakti the smallest, having an area of 138 square miles and Bastar the largest an area of 13,062 square miles. They are administered by hereditary chiefs, who hold on conditions of loyalty and good government set forth in patents and acknowledgments of fealty, but are nominally free from direct interference save in the case of sentences of death, which require the Chief Commissioner's confirmation. But, as a fact, the Government has exercised a very large amount of control, owing mainly to the frequency with which the States have been taken under direct management, because of either the minority or the misconduct of the chief.

The States pay a tribute to Government which amounts in the aggregate to about 2½ lakhs.

Statistics relating to the chief States are contained in the following table:—

State	Area.	Population 1911.	Revenue (approximate) in Lakhs.
	Sq. Miles.		
Bastar ..	13,062	433,310	3
Jashpur ..	1,963	174,458	1
Kanker ..	1,429	127,014	2
Khairagarh ..	931	155,471	3
Nandgaon ..	871	167,362	4
Raigarh ..	1,486	218,860	2
Surguja ..	6,055	248,703	2
Eight other States.	5,377	411,824	6
Total ..	31,174	2,117,002	23

Bastar.—This State, which lies to the south-east corner of the Provinces, is the most important of the group. It has an area of 13,067 square miles and a population of 433,310. The family of the Raja is very ancient, and is stated to belong to the Rajputs of the Lunar race. Up to the time of the Marathas, Bastar occupied an almost independent position, but a tribute was imposed on it by the Nagpur government in the eighteenth century. At this period the constant feuds between Bastar and the neighbouring State of Jeypore in Madras kept the country for many years in a state of anarchy. The chief object of contention was the Kotapad tract, which had originally belonged to Bastar, but had been ceded in return for assistance given by Jeypore to one of the Bastar chiefs during some family dissensions. The Central Provinces Administration finally made this over to Jeypore in 1863, on condition of payment of tribute of Rs. 3,000, two-thirds of which sum was remitted from the amount payable by Bastar. By virtue of this arrangement the tribute of Bastar was, until recently, reduced to a nominal amount. The cultivation of the State is extremely sparse. Rice is the most important crop. The State is ruled by the feudatory Chief. The Dewan of the State is a retired Deputy Commissioner of the Central Provinces who has three assistants under him. After a recent period of disturbance the State has returned to complete tranquillity and precautions are being taken to remove all causes of unrest by better supervision over the minor State officials and a very considerate forest policy. The chief town is Jagdalpur on the Indravati River.

Surguja.—Until 1905 this was included in Chota Nagpur State of Bengal. The most important feature is the Manipat, a magnificent tableland forming the southern barrier of the State. The early history of Surguja is obscure; but according to a local tradition in Palamau, the present ruling family is said to be descended from a Raksel Raja of Palamau. In 1758 a Maratha army overran the State, and compelled its chief to acknowledge himself a tributary of the Bhonsla Raja. At the end of the eighteenth century, in consequence of the chief having aided a rebellion in Palamau against the British, an expedition entered Surguja; and, though order was temporarily restored, disputes again broke out between the chief and his relations, necessitating British interference. Until 1818 the State continued to be the scene of constant lawlessness; but in that year it was ceded to the British Government under the provisional agreement concluded with Mudhoji Bhonsla of Berar, and order was soon established. The principal crops are rice and other cereals. The population is mainly aboriginal, the wild Korwa tribe being a perpetual source of trouble. A band of them committed several murders and robberies in 1910.

KASHMIR.

Kashmir (known to Indians as Jammu) lies to the east of the Indus and to the west of the Ravi. It is a mountainous country with just a strip of level land along the Punjab frontier, and intersected by valleys of which many are of surpassing beauty and grandeur. It may be divided physically into two areas: the north-eastern comprising the area drained by the Indus with its tributaries, and the south-western, including the country drained by the Jhelum, the Kishanganga and the Chenab. The dividing line between those two areas is the great central mountain range. The area of the State is 84,432 square miles, and the population 3,158,126.

HISTORY.—Various poets have left more or less trustworthy records of the history of the valley down to 1586, when it was conquered by Akbar. Srinagar, the capital, had by then been long established, though many of the fine buildings erected by early Hindu rulers had been destroyed by the Mahomedan kings who first appeared in the 12th century. In the reign of Sikandar the population became almost entirely Mahomedan. Akbar visited the valley three times. Jehangir did much to beautify it; but after Aurangzebe there was a period of disorder and decay, and by the middle of the eighteenth century the *Subah* of Kashmir was practically independent of Delhi. Thereafter it experienced the oppression of Afghan rule until it was rescued, in 1819, by an army sent by Ranjit Singh. Sikh rule was less oppressive than that of the Afghans. The history of the State as at present constituted is practically that of one man, a Dogra Rajput, Gulab Singh of Jammu. For his services to the Sikhs this remarkable man had been made Raja of Jammu in 1820, and he added largely to his territory by conquest. He held aloof from the war between the British and the Sikhs, only appearing as mediator after the battle of Sobraon (1846) when the British made over to him for Rs. 75 lakhs the present territories of the State. He had to fight for the valley and subsequently lost part of his State, Gilgit, over which the successors had at a heavy cost to reassert their claims. His son Ranbir Singh, a model Hindu, ruled from 1857 to 1885, when he was succeeded by his eldest son Major-General H. H. Maharaja Sir Partab Singh, G.C.S.I., G.C.I.E.

ADMINISTRATION.—For some years the Maharaja took no part in the administration of the State, but since 1905 he has exercised full powers, assisted by a Chief Minister—Rai Saheb Diwan Amar Nath, C.I.E.—a Home Minister, and a Revenue Minister. The four chief executive officers are the Governors of Jammu and of Kashmir, the Wazir Wazarat of Gilgit and the Wazir Wazarat of Ladakh. The real administrative power lies with the petty subordinate officers (tahsildars) who exercise revenue, civil, and criminal jurisdiction with regular stages of appeal: but distance and the absence of easy communications are practical checks on the use or abuse of appeals. The British Resident has his headquarters at Srinagar; there is also a Political Agent at Gilgit responsible to the Government of India for the administration of the outlying petty States; and a British Officer is stationed at Leh to assist in the supervision of Central Asian trade. In the Dogras the State has splendid materials for an Army, which consists of 6,961 troops, of whom 3,370 are maintained as Imperial Service troops.

FINANCE.—The financial position of the State is strong, and it has more than 46 lakhs invested in Government of India securities. The total revenue last year was 93 lakhs, the chief items being land revenue, forests, customs and octroi.

PRODUCTION AND INDUSTRY.—The population is pre-eminently agricultural and pastoral. The system of land tenure has been described as "ryotwari in ruins," great complexity existing owing to the fact that there is no local law of rent and revenue. The principal food crop is rice, maize, cotton, saffron, tobacco, hops (autumn crops) and wheat, barley, poppy, beans (spring crops) are also grown. Sheep are largely kept. The State forests are extensive and valuable. Exploration for minerals has not been attempted on sound principles. Vast fields of friable, dusty coal have been found. Gold has been found at Gulmarg and Sapphires in Padar. The industries of manufacture are chiefly connected with sericulture (the silk filature at Srinagar, the largest in the world, was destroyed by fire in July 1912), oil-pressing and the manufacture of wine. The woollen cloth, shawls, and wood carving of the State are famous.

COMMUNICATIONS.—The State contains only 16 miles of railway on the Tawi-Suchetgarh branch of the N.-W. Railway. The Jhelum is the only navigable river. At present there is much activity in improving road communications, but in many parts of the country wheeled traffic is unknown.

PUBLIC WORKS.—In 1904, a flood spill channel above Srinagar was constructed with a view to minimising the constant risk of floods; and it was hoped that the danger would be still further reduced by the carrying out of a scheme for lowering a part of the bed of the Jhelum, which has since been taken in hand. Good progress has been made with irrigation; but the most important schemes of recent years have been those for an electrical power station on the Jhelum River, and for a Railway into Kashmir. It was proposed to supply from this power station electrical energy for various State schemes (including the Jhelum dredging scheme) and for private enterprise and possibly for working the proposed Kashmir Railway. The works were completed about 1907, and the scheme according to the latest reports is working very satisfactorily. The proposal for a railway to Kashmir had been under discussion for many years, the nature of the country making the question of route a difficult one. In 1905, a decision was taken in favour of a line from Srinagar *via* the Jhelum Valley and Abbottabad, but the project has remained in abeyance pending the consideration of further schemes, among which are proposals for lines of ropeway from Jammu to Srinagar and from Srinagar to the western borders *via* the Jhelum Valley.

EDUCATION.—In educational matters Kashmir is the most backward tract in the whole of India. In the State as a whole only 2 in every 100 persons can read and write. The number of educational institutions has increased from 45 in 1891 to 379 in 1911.

Resident:—Lieut-Col. A. D' A. G. Bannerman; C.V.O., C.I.E.

Political Agent, at Gilgit—Major C. A. Smith.

Native States' Tribute.

Many of the States pay tribute, varying in amount according to the circumstances of each case, to the British Government. This tribute is frequently due to exchanges of territory or settlement of claims between the Governments, but is chiefly in lieu of former obligations to supply or maintain troops. The actual annual receipts in the form of tribute and contributions from Native States are summarised in the following table. The relations of the States to one another in respect of tributes are complicated, and it would serve no useful purpose to enter upon the question. It may, however, be mentioned that a large number of the States of Kathiawar and Gujarat pay tribute of some kind to Baroda, and that Gwalior claims tribute from some of the smaller States of Central India :—

States paying tribute directly to the Government of India.

	£	
Tribute from Jaipur	26,667	
„ „ Kotah	15,648	
„ „ Udaipur	13,333	
„ „ Jodhpur	6,533	
„ „ Bundi	8,000	
„ „ Other States	15,170	
		85,351
Contribution of Jodhpur towards cost of Erinpura Irregular Force	7,667	
„ of Kotah towards cost of Deoli Irregular Force	13,333	
„ of Bhopal towards cost of Bhopal Levy	10,753	
„ of Jaora towards cost of United Malwa Contingent	9,142	
Contributions towards cost of Malwa Bhil Corps	2,140	
		43,035
Fees on succession		3,437
Total		131,823
Central Provinces and Berar.		
Tribute from various States	....	15,696
Burma.		
Tributes from Shan States	28,524	
„ „ other States	1,367	
		29,891
Eastern Bengal and Assam.		
Tribute from Manipur	3,333	
„ „ Rambrai	7	
		3,340
Bengal.		
Tribute from various States	....	4,514 (Cooch Behar).
United Provinces.		
Tribute from Benares	12,667	
„ „ Kapurthala (Bahraich)	8,733	
		21,400
Punjab.		
Tribute from Mandi	6,667	
„ „ other States	3,086	
Fees on succession	133	
		9,886
Madras.		
Tribute from Travancore	53,333	
Peshkash and subsidy from Mysore	233,333	
„ „ „ „ Cochin	13,333	
„ „ „ „ Travancore	888	
		300,887
Bombay		
Tribute from Kathiawar	31,129	
„ „ various petty States	2,825	
Contribution from Baroda State	25,000	
„ „ Jagirdars, Southern Mahratta Country	5,765	
Subsidy from Cutch	5,484	
Fees on succession	3,457	
		73,660
Grand Total	....	591,097

It was announced at the Coronation Durbar of 1911 that there would in future be no Nazarana payments on successions. The details given above are for 1915.

Foreign Possessions in India.

Portugal and France both hold small territorial possessions in the Indian Peninsula.

The Portuguese possessions in India consist of the province of Goa, situated within the limits of the Bombay Presidency, on the Arabian Sea coast; the territory of Daman with the small territory called Pragana-Nagar Avely on the Gujarat coast, at the entrance to the Gulf of Cambay; and the little island of Diu, with two places called Gogla and Simbor, on the southern extremity of the Kathiawar Peninsula.

GOA.

Goa forms a compact block of territory surrounded by British districts. Savantwadi State lies to the north of it, the Arabian Sea on the west and North Kanara on the south, and the eastern boundary is the range of the Western Ghats, which separates it from the British districts of Belgaum and North Kanara. The extreme length from north to south is 62 miles and the greatest breadth from east to west 40 miles. The territory has a total area of 1,301 square miles and consists of the *Velhas Conquistas*, or Old Conquests, comprising the island of Goa, acquired by the Portuguese in 1510, and the neighbouring districts of Salsette and Bardez, acquired in 1543; and of the *Novas Conquistas*, or New Conquests, comprising the districts of Pernem, Sanquelim, Satary, Ponda, Sanguem, Quepem and Canacona, acquired in the latter half of the 18th century. The small island of Angediva situated opposite the port of Karwar, in the British district of North Kanara, forms administratively a portion of the province of Goa. This was acquired in 1505. The whole country is hilly, especially the eastern portion, the predominating physical feature being the Eastern Ghats, which besides bounding the country along the north-east and south-east, jut off westward and spread across the country in a succession of spurs and ridges. There are several conspicuous isolated peaks, of which the highest, Sonsagar, is 3,827 feet high.

The country is intersected by numerous rivers running westward from the Ghats, and the principal eight, which are all navigable, are in size of some importance. Goa possesses a fine harbour, formed by the promontaries of Bardez and Salsette. Half-way between these extremities lies the *cabo*, or cape, which forms the extremity of the island of Goa. This divides the whole bay into two anchorages, known as Aguada and Marmagao. Both are capable of accommodating the largest shipping from September to May, but Aguada is virtually closed during the south-west monsoon, owing to the high winds and sea and to the formation of sand bars across the estuary of the Mandovi river, which opens into Aguada. Marmagao is accessible at all times and is therefore the harbour of commercial importance. It is the terminus of the railway running to the coast from the inland British system of lines, a breakwater and port have been built there and the trade is considerable, being chiefly transit trade from British territory.

The People.

The total population in the whole Goa territory was 486,752 at the census of 1910. This gives a density of 343 persons to the square mile and the population showed an increase of 6 per cent. since the census ten years previously. In the Velhas Conquistas 91 per cent. of the population is Christian. In the Novas Conquistas Christians and Hindus are almost equally numerous. The Moslems in the territory are numbered in a few thousands. The Christians still very largely adhere to caste distinctions, claiming to be Brahmans, Charados and low castes, which do not intermarry. The Hindus are largely Maratha and do not differ from those of the adjacent Konkan districts of Bombay. All classes of the people, with the exception of Europeans, use the Konkani dialect of Marathi, with some admixture of Portuguese words. The official language is Portuguese, which is commonly spoken in the capital and the principal towns, as well as by all educated people. Nearly all the Christians profess the Roman Catholic religion and are spiritually subject to an archbishop, who has the titles of Primate of the East and Patriarch of the East Indies and exercises ecclesiastical jurisdiction also over a great portion of British India. (The Christians of Daman and Diu are subject to a Bishop who bears the titles of Bishop of Daman and Archbishop of Cranganore.) There are numerous churches in Goa, mostly built by the Jesuits and Franciscans prior to the extinction of the religious orders in Portuguese territory. The churches are in charge of secular priests. Hindus and Mahomedans now enjoy perfect freedom in religious matters and have their own places of worship. In the early days of Portuguese rule the worship of Hindu gods in public and the observance of Hindu usages were strictly forbidden and rigorously suppressed.

The Country.

One-third of the entire territory of Goa is stated to be under cultivation. A regular land survey was only recently made. The fertility of the soil varies considerably according to quality, situation and water-supply. The Velhas Conquistas are as a rule better cultivated than the Novas Conquistas. In both these divisions a holding of fifteen or sixteen acres would be considered a good sized farm, and the majority of holdings are of smaller extent. The staple produce of the country is rice, of which there are two good harvests, but the quantity produced is barely sufficient to meet the needs of the population for two-thirds of the year. Next to rice, the culture of cocoanut palms is deemed most important, from the variety of uses to which the products are applied. Hilly places and inferior soils are set apart for the cultivation of cereals and several kinds of fruits and vegetables are cultivated to an important extent. The condition of the agricultural classes in the Velhas Conquistas has improved during recent years, owing to the general rise in the prices of all classes of agricultural produce and partly to the current of emigration to British territory. Stately forests are found in the Novas

Conquistas. They cover an area of 116 square miles and are under conservation and yield same profit to the administration. Iron is found in parts of the territory, but has not been seriously worked. Manganese also exists and was worked to an important extent a few years ago.

Commerce.

In the days of its glory, Goa was the chief entrepot of commerce between East and West and was specially famous for its trade in horses with the Persian Gulf. It lost its commercial importance with the downfall of the Portuguese empire and its trade is now insignificant. Few manufacturing industries of any moment exist, and most manufactured articles in use are imported. Exports chiefly consist of cocoanuts, betel nuts, mangoes and other fruits and raw produce. A line of railway connects Marmagao with the Madras and Southern Mahratta Railway. Its length from Marmagao to Castle Rock, above the Ghats, where it joins the British system, is 51 miles, of which 49 are in Portuguese territory. The railway is under the management of the Madras and Southern Mahratta Railway administration, and the bulk of the trade of Marmagao port is what it brings down from and takes to the interior. The telegraphs in Goa territory are worked as part of the system of British India, and are maintained jointly by the British and Portuguese Governments. The Goa territory was formerly subject to devastating famines and the people now suffer heavy losses in times of drought. They are then supplied, though at great cost, with rice from British territory.

The Capital.

Nova Goa, the present capital of Portuguese India, comprehends Panjim and Ribandar, as well as the old city of Goa, and is six miles in extent. Old Goa is some five miles distant from the new city. Panjim occupies a narrow strip of land leading up to the Cabo, the cape dividing the Aguada bay from that of Marmagoa, and mainly slopes down to the edge of the Aguada. It was selected as the residence of the Portuguese Viceroy in 1759, and in 1843 it was raised to its present rank as the capital of Portuguese India. The appearance of the city, with its row of public buildings and elegant private residences, as seen from the water, is very picturesque and this impression is not belied by a closer inspection of its neat and spacious roads, bordered by decent, tidy houses. The most imposing public structures are the barracks, an immense quadrangular building the eastern wing of which accommodates the Lyceum, the Public Library and the Government Press. Other noticeable buildings are the Cathedral and various churches, the vice-regal palace, the High Court and so on. The square in the lower part of the town is adorned with a life-sized statue of Albuquerque standing under a canopy.

History.

Goa was captured for the Portuguese by Alfonso de Albuquerque in 1510. Albuquerque promptly fortified the place and established Portuguese rule on a firm basis. From this time Goa rapidly rose in importance and became the metropolis of Portuguese power in the East. There was constant fighting with the armies of the Bijapur kingdom, but the Portuguese held their own and gained the surrounding territory now known as the Velhas Conquistas.

The subsequent history of the town is one of ostentation and decay. Goa reached its summit of prosperity at the end of the sixteenth century. The accounts of travellers show that the Goa of those days presented a scene of military, ecclesiastical and commercial magnificence which has had no parallel in the British capitals of India. But the Portuguese based their dominion in India on conquest by the sword and they laboured to consolidate it by a proselytizing organisation which throws the missionary efforts of every other European power in India into the shade. Old Goa, as the ruins of the old capital are called to-day, had a hundred churches, many of them of magnificent proportions, and the Inquisition was a power in the land. The result showed how rotten was this basis and how feebly cemented the superstructure reared upon it.

Modern Times.

There was frequently recurring fighting and in 1741 the Marathas invaded the neighbourhood of Goa and threatened the city itself. An army of 12,000 men arrived from Portugal at the critical moment. The invaders were beaten off, and the Novas Conquistas were added to the Portuguese possessions. In 1844 the shelter given by Goa to fugitives from justice in British territory threatened to bring about a rupture with the British Government at Bombay. In 1852 the Ranes of Satari, in the Novas Conquistas revolted. In 1871 the native army in Goa mutinied and the king's own brother came from Lisbon to deal with the trouble and having done so disbanded the native army, which has never been reconstituted. But another outbreak among the troops took place in 1895 and the Ranes joining them the trouble was again not quieted until the arrival of another special expedition from Lisbon. The Ranes again broke out in 1901 and again in 1912, troops being again imported to deal with the last outbreak, which was only reported concluded in the summer of 1913.

Administration.

Goa is regarded as an integral portion of the Portuguese Empire and, with Daman and Diu, forms for administrative purposes one province subject to a Governor-General, who is appointed directly by the Lisbon Government and holds office for five years. Besides his civil functions, he is invested with supreme military authority in the province.

The Governor-General is aided in his administration by a Council composed of a Chief Secretary, the Judges of the High Court, the two highest military officers in Goa, the Attorney-General, the Inspector of Fazenda, the Health Officer and the President of the Municipal Chamber or Corporation of the capital (Camara Municipal das Ilhas) which is the oldest Municipal body in the East. As a rule, all the members give the

opinions and vote in every matter on which they are consulted by the Governor-General. There are five other juntas, or councils, called the Junta Geral da Provincia (general council of the province), the Conselho da Provincia (the council of the province), the Conselho Technico das Obras publicas, the Conselho-Inspector de Instruccao publica, and the Conselho de Agricultura. The first of these is composed of the Chief Secretary, the Archbishop or his substitute, the Attorney-General the Inspector da Fazenda, Inspector of Public Works, the Health Officer, a Professor of the Medico-Surgical College, a Professor of the Lyceum, or educational College, a Professor of the Normal School and a representative from each of the Municipal Corporations of the province.

In addition to this machinery of administration there are subordinate agencies for the local government of every district.

The Lisbon Government by a recent Decree, dated the 27th July 1917, have established new rules regarding the administration of Portuguese India, but those rules are not in force as yet.

DAMAN.

The settlement of Daman lies at the entrance to the Gulf of Cambay, about 100 miles north of Bombay. It is composed of two portions, namely, Daman proper, lying on the coast, and the detached pargana of Nagar Aveli, separated from it by a narrow strip of British territory and bisected by the B. B. & C. I. Railway. Daman proper contains an area of 22 square miles and 26 villages and has a population (1910) of 18,300. Nagar Aveli has an area of 60 square miles and a population (1910) of 29,020. The town of Daman was sacked by the Portuguese in 1531, rebuilt by the natives and retaken by the Portuguese in 1558, when they made it one of their permanent establishments in India. They converted the mosque into a church and have since built eight other places of worship. Of the total population the number of Christians is 1,586. The number of houses is 8,971, according to the same census. The native Christians adopt the European costume, some of the women dressing themselves after the present European fashion, and others following the old style of petticoat and mantle once prevalent in Spain and Portugal.

The soil of the settlement is moist and fertile, especially in the pargana of Nagar Aveli, but despite the ease of cultivation only one-twentieth part of the territory is under tillage. The principal crops are rice, wheat, the inferior cereals of Gujarat and tobacco. The settlement contains no minerals. There are stately forests in Nagar Aveli, and about two-thirds of them consist of teak, but the forests are not conserved and the extent of land covered by each kind of timber has not been determined. Before the decline of Portuguese power in the East, Daman carried on an extensive commerce, especially with the east coast of Africa. In those days it was noted for its dyeing and weaving.

The territory forms for administrative purposes a single district and has a Municipal Chamber and Corporation. It is ruled by a Governor invested with both civil and military functions, subordinate to the Governor-General of Goa. The judicial department is administered by a judge, with an establishment composed of a delegate of the Attorney-General and two clerks. In Nagar Aveli the greater part of the soil is the property of the Government, from whom the cultivators hold their tenures direct. A tax is levied on all lands, whether alienated or the property of the State. The chief sources of revenue are land-tax, forests, excise and customs duties.

DIU.

Diu is an island lying off the southern extremity of the Kathiawar Peninsula, from which it is separated by a narrow channel through a considerable swamp. It is composed of three portions, namely, Diu proper (island), the village of Gogla, on the Peninsula, separated by the channel, and the fortress of Simbor, about 5 miles west of the island. It has a small but excellent harbour, where vessels can safely ride at anchor in two fathoms of water and owing to the great advantages which its position offers for trade with Arabia and the Persian Gulf, the Portuguese were fired at an early period with a desire to obtain possession of it. This they gained, first by treaty with the Sultan of Gujarat and then by force of arms. Diu became opulent and famous for its commerce. It has now dwindled into insignificance. The extreme length of the island is about seven miles and its breadth, from north to south, two miles. The area is 20 square miles. The population of the town of Diu, from which the island takes its name, is said to have been 50,000 in the days of its commercial prosperity. The total population of the island, according to the census of 1910, is 14,170, of whom 271 were Christians.

FRENCH POSSESSIONS.

The French possessions in India comprise five Settlements, with certain dependent lodges, or plots. They aggregate 203 square miles, and had a total population in 1912 of 282,386. The first French expedition into Indian waters, with a view to open up commercial relations, was attempted in 1603. It was undertaken by private merchants at Rouen, but it failed, as also did several similar attempts which followed. In 1642 Cardinal Richelieu founded the first Campagnie d'Orient, but its efforts met with no success. Colbert reconstituted

the Company on a larger basis in 1664, granting exemption from taxes and a monopoly of the Indian trade for fifty years. After having twice attempted, without success, to establish itself in Madagascar, Colbert's Company again took up the idea of direct trade with India and its President, Caron, founded in 1668 the Comptoir, or agency, at Surat. But on finding that city unsuited for a head establishment he seized the harbour of Trincomalee in Ceylon from the Dutch. The Dutch, however, speedily retook Trincomalee; and Caron, passing over to the Coromandel coast, in 1672 seized St. Thome, a Portuguese town adjoining Madras, which had for twelve years been in the possession of Holland. He was, however compelled to restore it to the Dutch in 1674.

The ruin of the Company seemed impending when one of its agents, the celebrated Francois Martin, suddenly restored it. Rallying under him a handful of sixty Frenchmen, saved out of the wreck of the settlements at Trincomalee and St. Thome, he took up his abode at Pondicherry, then a small village, which he purchased in 1683 from the Raja of Gingee. He built fortifications, and a trade began to spring up; but he was unable to hold the town against the Dutch, who wrested it from him in 1693, and held it until it was restored to the French by the Peace of Ryswick in 1697. Pondicherry became in this year, and has ever since remained, the most important of the French Settlements in India. Its foundation was contemporaneous with that of Calcutta. Like Calcutta, its site was purchased by a European Company from a native prince, and what Job Charnock was to Calcutta Francois Martin proved to Pondicherry. On its restitution to the French by the Peace of Ryswick in 1697, Martin was appointed Governor, and under his able management Pondicherry became an entrepôt of trade.

Chandernagar, in Lower Bengal, had been acquired by the French Company in 1688, by grant from the Delhi Emperor; Mahe, on the Malabar Coast, was obtained in 1725-6, under the government of M. Lenoir; Karikal, on the Coromandel Coast, under that of M. Duma, in 1739. Yanam, on the coast of the Northern Circars, was taken possession of in 1750, and formally ceded to the French two years later.

Administration.

The military command and administration-in-chief of the French possessions in India are vested in a Governor, whose residence is at Pondicherry. The office is at present held by Monsieur A. Martineau. He is assisted by a Chief Justice and by several "Chefs de Service" in the different administrative departments. In 1879 local councils and a council-general were established, the members being chosen by a sort of universal suffrage within the French territories. Seventeen Municipalities, or Communal Boards, were erected in 1907, namely, Pondicherry, Arlancoupam, Modeliarpeth, Oulgaret, Villenour, TirouboUvane, Bahour and Nettapacam, for the establishment of Pondicherry; Karikal, Neravy, Nedouncadou, Tirunalar, Grande Aldee, Cotchery, for the establishment of Karikal, and also Chandernagar, Mahe and Yanam. On municipal boards natives are entitled to a proportion of the seats. Civil and criminal courts, courts of first instance and a court of appeal compose the judicial machinery. The army and establishments connected with the Governor and his staff at Pondicherry, and those of administrators at Chandernagar, Yanam, Mahe and Karikal, together with other headquarters charges, necessarily engross a large proportion of the revenue. All the state and dignity of an independent Government, with four dependent ones, have to be maintained. This is effected by rigid economy, and the prestige of the French Government is worthily maintained in the East. Pondicherry is also the scene of considerable religious pomp and missionary activity. It forms the seat of an Archbishop, with a body of priests for all French India; and of the Missions Etrangeres the successors of the Mission du Carnatic founded by the Jesuits in 1776. But the chief field of this mission lies outside the French Settlements; a large proportion of its Christians are British subjects and many of the churches are in British territory. The British rupee is the ordinary tender within French territories. A line of railway running *via* Villenour, from Pondicherry to Villupuram on the South Indian Railway, maintains communication with Madras and the rest of British India, and Karikal is linked to the same railway by the branch from Peralam. A Chamber of Commerce consisting of fourteen members, nine of them Europeans or persons of European descent, was reorganised by a decree of 7th March, 1914. The capital, Pondicherry, is a very handsome town, and presents, especially from the sea, a striking appearance of French civilisation.

People and Trade.

The Settlements are represented in Parliament at Paris by one senator and one deputy. These are at the present time Mons. F. Flandin and Mons. P. Bluysen, respectively. There were in 1917, 62 primary schools and 3 colleges, all maintained by the Government with 386 teachers and 9,814 pupils. Local revenue and expenditure (budget of 1918) Rs. 19,63,500. The principal crops are paddy, groundnut, and ragi. There are at Pondicherry 5 cotton mills, and at Chandernagar 1 jute mill; the cotton mills have, in all, 1,622 looms and 73,092 spindles, employing 12,020 persons. There are also at work one oil factory and a few oil presses for groundnuts, one ice factory, one ironworks and a cocotine factory. The chief exports from Pondicherry are oil seeds. At the ports of Pondicherry, Karikal and Mahe in 1917 the imports amounted to 13,225,207 francs and the exports to 20,366,92[illegible] francs. At these three ports in 1917, 20[illegible] vessels entered and cleared. Tonnage 305,45[illegible]. Pondicherry is visited by French steamers sailing monthly between Colombo and Calcutta in connection with the Messageries Maritimes. The figures contained in this paragraph are the latest available and are corrected up to September 1917.

PONDICHERRY.

Pondicherry is the chief of the French Settlements in India and its capital is the headquarters of their Governor. It is situated on the Coromandel Coast, 105 miles from Madras by road and 122 by the Villupuram-Pondicherry branch of the South Indian Railway. The area of the Settlement is 115 square miles and its population in 1915 was 266,828. It consists of the four communes of Pondicherry. The Settlement was founded in 1674 under Francois Martin. In 1693 it was captured by the Dutch but was restored in 1699. It was besieged four times by the English. The first siege under Admiral Boscawen in 1748 was unsuccessful. The second, under Eyre Coote in 1761, resulted in the capture of the place, which was restored in 1765. It was again besieged and captured in 1778 by Sir Hector Munro, and the fortifications were demolished in 1779. The place was again restored in 1785 under the Treaty of Versailles of 1783. It was captured a fourth time by Colonel Braithwaite in 1793, and finally restored in 1816.

The Settlement comprises a number of isolated pieces of territory which are cut off from the main part and surrounded by the British District of South Arcot, except where they border on the sea. The Collector of South Arcot is empowered to deal with ordinary correspondence with the French authorities on these and kindred matters, and in this capacity is styled the Special Agent. At Pondicherry itself is a British Consular Agent accredited to the French Government, who is usually an officer of the Indian Army. The town is compact, neat and clean, and is divided by a canal into two parts, the Ville blanche and the Ville noire. The Ville blanche has a European appearance, the streets being laid at right angles to one another with trees along their margins reminding the visitor of continental boulevards, and the houses being constructed with courtyards and embellished with green venetians. All the cross streets lead down to the shore, where a wide promenade facing the sea is again different from anything of its kind in British India. In the middle is a screw-pile pier, which serves, when ships touch at the port, as a point for the landing of cargo, and on holidays as a general promenade for the population. There is no real harbour at Pondicherry; ships lie at a distance of about a mile from the shore, and communication with them is conducted by the usual *masula* boats of this coast. Facing the shore end of the pier is a statue of the great Dupleix, to whom the place and the French name owed so much.

CHANDERNAGAR.

Chandernagar is situated on the bank of the Hooghly, a short distance below Chinsura. Population (1915) 27,644. The town was permanently occupied by the French in 1688, though previously it had been temporarily occupied by them at a date given as 1672 or 1676. It did not, however, rise to any importance till the time of Dupleix. It changed hands between British and French various times during the Napoleonic wars and was finally restored to the French in 1816.

The former grandeur of Chandernagar has disappeared, and at present it is little more than a quiet suburban town with little external trade. The railway station on the East Indian Railway is just outside French territory 22 miles from Calcutta (Howrah). The chief administrative officer is the Administrator who is subordinate to the Governor of the French Possessions. The chief public institution is the College Dupleix, formerly called St. Mary's Institution, founded in 1882 and under the direct control of the French Government.

KARIKAL.

Karikal lies on the Coromandel Coast between the Tanjore District of Madras and the Bay of Bengal. The Settlement is divided into three communes, containing 110 villages in all, and covering an area of 53 square miles. It is governed by an Administrator subordinate to the Governor at Pondicherry. The population has in recent years rapidly decreased. In 1883 it was 93,055; in 1891, 70,526; in 1901, 56,595; in 1912, 56,579; and in 1915, 56,867; but the density is still very high, being 1,068 persons per square mile. Kumbakonam is the only taluk in Tanjore District which has a higher density. Each of the three communes—namely, Karikal, La Grande Aldee, and Nedungadu—possesses a mayor and council. The members are all elected by universal suffrage, but in the municipality of Karikal half the number of seats are reserved for Europeans or their descendants. The country is very fertile, being irrigated by seven branches of the Cauvery, besides many smaller channels.

The capital of the settlement is situated on the north bank of the river Arasalar, about 1½ miles from its mouth. It has a brisk trade in rice with Ceylon, and to a less extent with the Straits Settlements. It has no commerce with France, and very little with other French colonies. The port is merely an open roadstead, provided with a light-house 142 feet high, the light in which has a range of from 8 to 10 miles. In 1899 Karikal was connected with Peralem on the Tanjore District Board Railway. Karikal finally came into French possession on the settlement after 1815.

The Indian Frontiers.

There can be few more unsatisfactory tasks than to attempt to deal, for a volume of the character of "The Indian Year Book," with the frontiers of India in December 1918. For there do not exist any of the bases for an authoritative discussion. All our old principles, all our old standards have been swept away. It is one of the most remarkable features of the situation that the State which we used to regard as the most unstable, Afghanistan, has proved in experience to be the most stable. Everything else has been violently revolutionised; everything else is in a state of flux.

It will be shown, when we consider the history of the Indian frontiers, that for half a century British policy was dominated by antagonism to Russia. That antagonism became far less acute, if it did not entirely disappear, when the series of minor agreements, like the settlement of the Penjdeh issue and the Pamir question, crystallised in the Anglo-Russian Agreement But whilst Great Britain and Russia had been wrangling, Germany had been acting. With relentless persistence she had laid the foundations of her great Middle Eastern policy, the "B. B. B", Berlin-Byzantium-Baghdad scheme, broad and deep. She had secured absolute political domination in Constantinople; she had used that domination to extract from the Sultan Abdul Hamed the Baghdad railway concession and begin the construction of the line; and most surprising of all, she had established an equal domination over the revolutionary government of the Young Turks, and not only secured the recognition of the onerous Baghdad railway concession, but its extension by the acquisition of a valuable concession of harbour works at Alexandretta which promised to give her command of the commerce of the Eastern Mediterranean. By the time Great Britain and Russia had composed their differences, they found that the *tertium quid*, Germany, had stepped in and promised to carry off the surprise. Russia warded off the attack by the Black Sea Agreement; Great Britain was helpless, for Germany was on the ground. This was the position when the war broke out.

Now every one of the principles which we used to accept in considering our frontier policy has been swept sway. The military collapse of Russia, following the revolution, removed from the Borders of India the greatest military and political counterpoise to Germany. This occurred at a time when Germany was completely dominant in the Near East. Bulgaria was her close Ally, and under the crooked Tsar Ferdinand, her willng tool. Turkey was for all practical purposes a German province. Such Russian government as existed, the government of the Bolsheviks, was in the pay of Germany; it is now known from official sources that Lenin and Trotzky were gorged with German gold. Even amid her preoccupations in the West Germany was quick to profit by these advantages to prosecute the great ambition which precipitated the war, the establishment of an unbroken chain of communication and influence through the middle East to the shores of the Persian Gulf. The Ukraine was made an appanage of Germany. German armies swept over Southern Russia through Odessa to the Don, and the Black Sea became a German lake, dominated by the former Russian Black Sea Fleet, which passed by bribery into German hands. German and Turkish armies invaded the Caucasus to the shores of the Caspian Sea at the oil city of Baku. Plans were made to carry the war across the Caspian to Central Asia, and from Central Asia into Afghanistan In Central Asia, where Russian arms had preserved peace and order, the collapse of those arms led to the emergence of fresh and nebulus status. India had to create a new army of half a million men in order to protect her borders. Never were the Prussian eagles more menacing.

Then this elaborate structure disappeared almost in a night. The smashing victories of General Allenby in Palestine spread consternation in Turkey. Her outlying troops were hastily recalled to Constantinople for the defence of the capital. The Allied forces under the French General, Franchet d'Esperey, immediately afterwards struck the Bulgarian armies in Macedonia so shrewd a blow that they were cut in twain and the Bulgarian Government surrendered unconditionally. The loyal Russians in Siberia, with a nucleus of Czech-Slovaks formed from the prisoners taken by Russia from Austria in the early days of the war attacked the scattered Bolsheviks, and with the assistance of the Allies established their control from the upper Volga to the Pacific.

Then with a dramatic swiftness, which left the whole world agape, the end came. Bulgaria seized the opportunity afforded by the defeat in Macedonia to secure the peace for which the whole State was waiting and surrendered unconditionally. Turkey haggled, and then followed suit. The sentinels at the gate having abandoned their post Austria-Hungary craved and obtained the armistice which amounted to surrender. Germany held out till November 11th and was glad to accept an armistice which left her at the mercy of the Allies. If anything the victory of the Allies has been too complete. They have destroyed Germanism as an aggressive force so absolutely that there is no certain form of government with which to negotiate. Austria-Hungary and Turkey are in a condition of starving chaos. Germany has to fight the extreme socialists, who are little removed from the Bolshevists of Russia. In Russia confusion, disorder, political murder and starvation grow worse every day. The task of the Allies, to beat the Germans, has succeeded; they are now confronted with the even greater task of evolving order out of the deplorable confusion which has followed the collapse of military despotism.

What final solution can possibly emerge out of this welter? That is a problem none but the very foolish would dare attempt to solve. What is to be the future of Mesopotamia, of Palestine, of Constantinople, of the remains of the Turkish Empire? What sort of State

is to be evolved from the appalling chaos in Russia? No-one dare attempt an answer. But we cannot see any solution, unless we study these tremendous issues in the light of the history of the lands which have been thrown by German ambitions into the melting pot. Therefore we repeat our brief discussion of the history of the Land Route to the East, for in the light of that history we can discern some of the factors which remain constant despite the tremendous disturbance everywhere recorded, which must govern the solution which will be attempted when the Allies sit in conference.

A Page from History.

In the earlier editions of The "Indfan Year Book," in the articles on the Indian frontires, it was pointed out that this question was for nearly three generations an issue between Great Britain and Russia. With one or two notable exceptions, British statesmen and British soldires were able to view this issue solely in terms of Russia; they attempted to meet it by opposing Russia in every part of the world: by building up buffer states between the Indian Empire and Russia in Asia; and by maintaining inviolate the isolation of India on the landward side. A sketch of the frontier difficulties of the Indian Government since the British began to assume territorial power in India is really a reflection of the history of Europe. Our earliest dangers were either internal, or came from the sea. The sea menace was not of long duration. The defeat of the Portuguese and the Dutch left us with only one serious rival, the French, and when the sea power of France had been shattered by the foiling of the gallant Suffren, her schemes for dominion broken by the feeble support given to the great Duplex, and her hopes of advantage in India finally dispersed by the overthrow of Hyder Ali, then the foreign menace lapsed for well-nigh half a century. Meantime the process of internal consolidation advanced so rapidly that when renewed pressure came from the North, there was no rival to the British in India, and only one considerable military power, the Sikhs under Ranjit Singh. Such were the conditions when fears of Russian intrigues in Afghanistan, and the belief that the Amir Dost Mahomed was lending a ready ear to them, induced the disastrous attempts to set the exiled Shah Shuja on the throne of Afghanistan, and inaugurated the most deplorable episode in Indian frontier policy, the war of 1838. That was the first stage in the long duel between Great Britain and Russia for influence in Central Asia and on the confines of India. There are no pages in British history which are so unpleasant to turn. Our policy may be summed up in a sentence—impotent opposition to the Russian advance in Central Asia. Russian policy was much more simple. In part her advance sprang from the inevitable clash of a higher civilisation with a lower; in part, no doubt, her officers were not loth to pay off, by setting us in a ferment in Central Asia, scores made on the heights of Balaclava and at the Berlin Conference. It was not until war was avoided by a hair's breadth that relations began to improve. The Russo-Afghan affray at Penjdeh in 1885 brought both countries to a realisation of what they were nearly fighting over. After that there was a slow improvement. The Russo-Afghan boundaries were delimited. The frontiers on the Pamirs were settled. There were alarums and excursions during the Russo-Japanese war, when erroneous accounts were circulated of great Russian concentrations in Central Asia, and again, when intrigues with Tibet forced Lord Curzon to send the Younghusband Expedition to Lhasa. But the ground was gradually prepared for the Anglo-Russian Agreement, and since after conclusion of that instrument the Frontier question, as it used to be understood, has faded into the background; until it was revived by German aggression.

The Land Route.

We have said that the Indian frontier question was a reflection of the general European situation. Whilst the gaze of the British people was concentrated on Russia, which with her huge Asiatic possessions could never have seriously considered the conquest of India, they failed to see the real menace which sprang from the eastern ambitions of Germany. It is one of the ironies of the situation that a British Ambassador at Constantinople, who is generally described as able, actually encouraged the advent of Germany into Asia Minor as a counterpoise to Russia and thus laid the train for the present war. For it is not open to doubt that the ultimatum to Serbia was designed to reduce that State to a condition of servitude to Austria, and thereby to pave the way for an advance to Salonika, the conquest of Constantinople, and an advance through Asia Minor to the Persian Gulf. All these ambitions were centered in the revival of the **Land Route to the East.** We study our history so carelessly that the real history of the land route to the East survives in little more than a shadowy knowledge of the travels of Marco Polo. But for centuries the land route was one of the great highways of the world. When Alexander set out on his career of conquest twenty-two centuries ago, there was an easy high road from Mesopotamia to Seistan and not a very difficult one to Mekran; and so it came about that migratory movements, either compulsory or voluntary, continued through centuries, ever extending their scope until checked by the deserts of the Indian frontier, the highlands of the Pamirs or Tibet, or the cold wastes of Siberia. The **closing of this road** was due to the eruption of the Afghan, the Turk and the Mongol; and in particular to the final downfall of the Empire of the Kaliphs before the destroying hordes of Chengiz Khan and Tammerlane. The land route was closed, and the perfection of sea communications prevented the existence of any strong economic need for its revival. The improvement of the caravan route between Nushki and Seistan, for Meshed, represents the only improved land communication of the British Empire for all these years. The abortive proposal for a railway along the Euphrates Valley meant the killing of the one project which might have prevented the later complications.

Advent of Germany.

But if the British people failed to understand the teachings of history, and were lulled into the complacent belief that the land

could be indefinitely closed and all traffic with the East confined to the sea, whereon they were masters, the German Government refused to subscribe to this comfortable delusion. The story of the revival of the land route, and with it a whole **chain of German ambitions** is little known, and was for long preserved in fragments; it has however been told with authority and clearness in the 29th number of "The Times" History of the War, to which the reader in search of more detailed information is referred. We propose to summarise that story here, although parts of it more properly belong to the detailed frontier sections which follow:—

The first visit of the Emperor William to Constantinople in 1889 saw the dawn of a **Pan-Germanic Scheme** which was known in Berlin as the B.B.B.—Berlin-Byzantium-Baghdad. After the war began, a Professor, lecturing at Berlin, said that Germany's aims might be summed up in four catchwords—North Sea, Constantinople, Baghdad, Indian Ocean. Another favourite expression, attributed to the Emperor, was a Germanic wedge reaching from Hamburg to the Persian Gulf. The steps towards this goal were very deliberately taken. The first measure was to acquire supreme **influence at Constantinople.** This was done by assiduously courting Abdul Hamid, and discreetly maintaining his influence against the rest of Europe. At a time when Abdul Hamid's hands were red with the blood of the Armenians murdered by his orders in his capital and his provinces, the Kaiser professed himself his warm friend, and steadfastly refused to support any measures to save the lives of the Armenians or to check misgovernment in Macedonia. The reward came in valuable concessions. The Deutsche Bank group, which had acquired control of the railways of European Turkey, extended its influence to Asia Minor. After the second visit of the Kaiser to Constantinople in 1898, there came the Baghdad Railway concession (q. v.) by which the Sultan granted a concession for the continuation of the Anatolian railways (a German enterprise) to Baghdad and the Persian Gulf to a German syndicate. This was styled the Imperial Ottoman Baghdad Railway Company, and the concession was signed on behalf of Germany by Herr von Siemens, of the Deutsche Bank. By a further and more definite concession, granted in 1903, to Herr von Gwinner, of the Deutsche Bank, Turkey guaranteed interest on the cost of the line at the rate of £700 per annum per kilometre. This was sufficient to ensure the promoters a handsome profit on the enterprise, regardless of the traffic conditions. There is a good deal of misconstruction with regard to the line which the Germans are building under this concession. All sorts of estimates have been made on the assumption that the line will be suited only for slow trains, and the conclusion has been drawn that the sea route will be able to complete with it for passenger traffic. The fact is that the later sections of the line are being built to a standard which in India is applied to **express traffic,** and which precludes in the Indian hot weather permits trains unable run at fifty miles an hour.
ence .

Persian Gulf Port.

An essential part of this scheme was a port to serve as a terminus for the railway in the Persian Gulf. The steps taken to this end are very characteristic of Teutonic commercial diplomacy. The **first German firm** to appear in the Gulf was that of Wonckhaus & Co., of Hamburg, which in 1896 began to deal in shells and mother of pearl at Lingah. The next year the Germans established a vice-consulate at Bushire; there were then six German subjects in the Persian Gulf. In 1899, after the signing of the definitive Baghdad Railway concession, this activity increased. The German cruiser Arcona visited various parts of the Gulf. A party of German "scientists" appeared at Bunder Abbas. In 1900 Herr Stemrich, German Consul-General at Constantinople, travelled overland to the Gulf at the head of a mission, which included the German Military Attache at Constantinople. He visited Sheikh Mubarak of Koweit and tried to buy a site at Ras Kathama, at the head of the Bay, as a terminus for the railway. He was refused, for the Sheikh had entered into an agreement with Great Britain not to lease or dispose of any part of his possessions to a foreign power without our permission. Baffled in direct negotiations, the Germans, who were now all-powerful at Constantinople, stirred up the Turks to attack Sheikh Mubarak. In 1901 a Turkish corvette, packed with troops, sailed into Koweit harbour and the commander announced that he proposed to take possession of the town. A British cruiser intervened and the Turks sailed away. Later a high Turkish official, with a menacing letter to the Sheikh, entered the harbour and retired for the same reason. Two other attempts were made: the first was to stir up Ibn Rashid, of Central Arabia, to attack Koweit, the second to incite Mubarak's nephews to the same end; with the failure of these efforts the direct German attacks on Koweit came to a conclusion. They once again had recourse to the Turks. They seem to have discovered an alternative terminus to the railway in at Khor Abdullah, north of Koweit, and sent troops down to establish posts there, which remained until the eve of the war.

Meantime **commercial penetration** was energetic The firm of Wonckhaus was exceedingly active and expanded all over the Gulf, run on lines which could not have been commercially profitable. Various attempts were made to acquire a *pied a terre*, and one almost succeeded. The Sheikh of Shargah granted a concession to three Arabs to work the red oxide deposits on the island of Abu Musa and the Arabs transferred it to the Wonckhaus firm. The Sheikh protested and with the assistance of the British the intruders were removed; the German Press protested, but the Government confined themselves to a formal caveat. Another German agent sought to obtain an irrigation concession in the Karun. The Hamburg-America Company entered the Gulf trade with a great flourish of trumpets and a display calculated to impress the Arabs. This was the position when three years before the war a serious attempt was made to **arrive at an**

agreement between Great Britain, Germany and Turkey which would regularise the position. It provided that the terminus of the Baghdad Railway was to be at the true commercial terminus, Basra. No extension beyond Basra was to be made without the sanction of Great Britain. Turkey agreed to abandon her pretention to suzerainty over the Bahrein Islands, Maskat and the territory of the Trucial Chiefs, and to evacuate the Peninsula of El Katr, near Bahrein. Great Britain agreed to recognise the suzerainty of Turkey over Koweit, on the condition that Turkey did not interfere in the internal affairs of the Sheikh and recognised the British conventions with Mubarak. This agreement, and a complementary agreement with Germany, were understood to be ready for signature when the war broke out.

From this brief survey it will be seen that the question of Asia Minor is inseparable from the general question of Asia. The writings of her publicists, apart from the general trend of her policy, show quite clearly that in the eyes of Germany the Baghdad Railway was only the stepping-stone to the political and commercial domination of India. It was with this bribe that the Kaiser secured the support of German commercial magnates for his aggressive schemes. Russia is out of consideration. Great Britain and India have no aggressive designs, nor any land hunger, in Asia Minor or in Persia. But neither the British Empire, nor the civilised world, can possibly afford to see these lands fall under the dominion of a great aggressive military power. At the same time their past governments have so completely destroyed all bases of authority and vigorous national life, that they are incapable of standing alone. To apply to them the doctrine of self-determination would be to apply a standard in regard to which there are none of the factors necessary for determination; to use that phrase for the purposes of a hollow sham would be to throw these countries into a condition of bankrupt confusion. Some means must be found of maintaining order and progrers until a national government or administration can be evolved, and that will be the task of a generation. The Allies will either have to establish Allied control or to entrust certain of the Allied States, with the task of maintaining law and order and of finding the impetus to progress. The exact form of this protection will have to be determined in the Conferences which will settle the terms of peace.

THE CAMPAIGN IN MESOPOTAMIA.

In previous editions of the Indian Year Book the operations in Mesopotamia have been very fully summarised. They will be found for purposes of reference described in the Year Book for 1917, pp. 122 to 132; together with a summary of the report of the Mesopotamian Commission in the Indian Year Book, 1917, pp. 133 to 137; operations leading to the capture of Baghdad, pp. 137 to 141. Later operations are described in a report which was published in Simla on September 27th, 1918, from Lieut.-General Marshall who assumed the command of the forces on the 18th November 1917, consequent on the death from cholera of Lieut.-General Maude. This despatch covers operations from October 1st, 1917, to 31st March 1918, since when there has been no major fighting in Mesopotamia.

Whilst this despatch deals with matters of comparatively minor importance they are full of interest. In the course of it Lieut.-General Marshall remarks that at the commencement of the period covered by the despatch the Mesopotamian force was opposed on the north, by Turks who were holding the hill nomads, Jebel Hamrin, while up the Tigris they were entrenched in front of Duai and the left wing was secured at Ramadi. At the beginning of October it was decided to clear the Turks from the left bank of the Diala and occupy the Jebel Hamrin astride that river in order that the control of the canals might be in our hands and the objectives were gained and a position astride the Diala gorge protecting the headworks of the canals was seized and consolidated. Whilst the operations referred to were in progress the 18th Turkish Army Corps on the Tigris undertook a counter demonstration against our troops on that line and in the middle of October advanced as far as El-Hubeslat, eight miles north of Samarra, where they proceeded to entrench themselves. They were driven above this position before they had time to consolidate their entrenchment and pushing rapidly forward our force occupied Tekrit whence the Turks fled in disorder losing 2,000 men whilst a considerable booty fell into our hands.

Towards the end of November it was decided to attack that part of the 13th Army Corps which was holding the Diala River above, Mansuriya, the passes over the Jebel Hamrin and Kara Tepe. These operations were successful and on the 8th December the troops were withdrawn from the forward areas but the Sakaltutan and Abu Zenabil passes were held and a bridge-head established at Kizil Robat with a view to further action in the future. On the 9th December Khanikin was occupied and the communications in that area improved. On the Euphrates Ramadi had been captured in September and in February it was decided to capture Hit and its garrison. Hit was occupied on the 9th March and Salahiya on the 10th, the Turks retreating to Khan Baghdadi. It was decided to drive the enemy as far as possible from Hit and to inflict all possible damage on him. The enemy force was completely surrounded with the loss of the commander and the staff of the 50th Turkish Division; the commander of Ana, two regimental commanders, 213 officers and 5,122 other ranks inclusive of Germans. The development of events in Central Asia consequent upon the German alliance with the Russian Bolshevik Government caused the distribution of a large proportion of the Mesopotamian force into Persia and Central Asia: and the victories of General Allenby in Palestine finally broke the Turkish military power.


Suleimanie
Merivan
Kudjur
Kifri
Khosrabad
Samarra
OIL WELLS
Khanikin
Kasr-i-Shirin
To Teheran
Kizil Robat
Karind
Hamadan
Bakuba
Mendali
KIRMANSHAH
Firosabad
BAGDAD
PERSIA
Burudjird
Bedrai
Azizie
KHOREMABAD
El Dwasa
Kut-el-Amarah
Shatt-el-Hai R.
Imam Ali Sherji
Abidiz
Disful
AMARA
Dufes
Karun R.
Shushter
Kale Sale
Euphrates R.
Nasiriyeh
OIL WELLS
Hauwise
Wais
Ahwaz
NEZRA
Suk-el-Shuyukh
New Channel
Motihan
Tembi
Rapi-Hormus
BASRA
Shaiba
Zobeir
MOHAMMERAH
Shatt el Arab
PIPE LINE
Diaisun
Abadan
Miles
100
PERSIAN GULF

THE PERSIAN GULF.

The situation in the Persian Gulf, which is at present the corner stone of the Indian frontier problem, is one of baffling indefiniteness. Our first appearances in these waters was in connection with the long struggle for supremacy with the Portuguese, the French and the Dutch, who had established trading stations there. With the capture and destruction of the great entrepot which the Portuguese had established at Ormuz, and the supersession of the land route by the sea route, coupled with the appearance of anarchy in the interior, the importance of the Gulf declined. The Indian Government remained there primarily to preserve the peace, and this task it has since successfully performed. Piracy, which was as destructive as the ravages of the Barbary corsairs, was stamped out, the Trucial Chiefs who occupy the Pirate Coast were gradually brought into close relations with the British Government, and the vessels of the Royal Navy have since kept watch and ward in the Gulf, whilst our Consuls have regulated the external affairs of the Arab rulers on the Arabian Coast.

A Policy of Abnegation.

In return for these services Great Britain has claimed no selfish advantages. The waters of the Gulf are as free to the navigation of other flags as to the Red Ensign. The only territorial possession is the tiny station of Bassidu. Point after point has at one time or another been occupied by British troops. Muhammerah and the lower valley of the Karun valley were occupied during the war with Persian in 1857. Bushire was long held in the same connection, and still bears marks of our regime in the one tolerable road. The Island of Kharak was occupied from 1838 to 1842, and again in 1857. We had a military station at Kais during the Pirate wars, and a military and naval station at Kishm from 1820 to 1879. Jask was occupied as a cable station, but subsequently returned to Persia. The only surveys of the waters are British; the only cables are British; the few navigation marks are maintained by the British India Company, and two steamship services, a fast mail service and a slow trading service, are run by the same corporation. Apart from these direct acts, Great Britain might at any time have seized the whole Arabian Coast and the Persian shore. But in pursuit of a resolute self-denying ordinance she has kept the peace and demanded no reward.

European Intrusions.

Left to herself, Great Britain would desire no other policy. But the affairs of the Persian Gulf have passed into the region of international politics, and the past quarter of a century has witnessed successive efforts to turn the British position. Basing her interference on a treaty which gives her equal rights with Great Britain, France attempted to acquire a coaling station at Jissa, near Maskat, and subsequently obstructed British efforts to stamp out the slave trade, and the arms traffic, which was supplying weapons of precision to the tribes on our North-Western Frontier. Turkey, whether acting on her own volition, or as the *avant courier* of Germany, threatened the territory of the Sheikh of Bahrein, who is in special relations with us, and of the Sheikh of Koweit, who owns the only harbour which would make a Gulf terminus of the Baghdad Railway. Persia, stirred from Teheran, when Russian influence at the court of the Shah in Shah was supreme, established a foreign Customs service in the Gulf, and pressed our good friend, the Sheikh of Muhammerah. Russia and Germany sent heavily-subsidised merchant ships into the Gulf, in order to establish trading rights, and posted Consuls, where there was neither trade nor legitimate interest. The collapse of authority in Persia has raised, in an acute form, the whole future of the Persian shore; and in the present stage of the war it is impossible to say what stable authority can be established in these waters.

The Gulf and the Empire.

With these attacks there has come a closer appreciation of the bearing of the Persian Gulf on the defence of the Indian Empire. The strategic importance of these waters has been laid down by a writer of unchallenged authority and unbiassed mind. Writing in the *National Review*, Admiral Mahan said, "Concession in the Persian Gulf, whether by formal arrangement (with other Powers) or by neglect of the local commercial interests which now underlie political and military control, will imperil Great Britain's naval situation in the Farther East, her political position in India, her commercial interests in both, and the Imperial tie between herself and Australasia." Following this, successive British Governments have made declarations of policy which are satisfactory, as far as words can go. Speaking in the House of Lords on May 5, 1903, Lord Lansdowne, then Secretary of State for Foreign Affairs, said "We (*i.e.*, His Majesty's Government) should regard the establishment of a naval base or of a fortified port in the Persian Gulf by any other Power as a very grave menace to British interests which we should certainly resist with all the means at our disposal." This declaration of policy has since been endorsed by Sir Edward Grey. But the question which arises is whether, in view of the intrusion of foreign Powers with aggressive designs, and the changing conditions on the littoral, the purely negative policy which has hitherto satisfied Great Britain will suffice. It is a hard fact but a true one, that if British authority disappeared to-morrow, it would leave no other relic than the Abadan oil refinery; a few consular buildings and the tradition of justice and fair dealing. That is a question which can best be considered after a brief survey of the various jurisdictions which are established in the Gulf.

Maskat.

Maskat, which is reached in about forty-eight hours from Karachi, is outside the Persian Gulf proper. It lies three hundred miles south of Cape Musandim, which is the real entrance to the Gulf, but its natural strength and



Map of the Persian Gulf.

his torical prestige combine to make it inseparable from the politics of the Gulf, with which it has always been intimately associated.

The approach to Maskat is dramatic. The mail steamer gently feels her way along a coast more black and forbidding even than the iron-bound littoral of the Gulf of Suez, which is so familiar to the eastward passenger. Suddenly there appear on the coast the white houses of the trading settlement of Mattra, which lies to the north of Maskat. Then with a sharp turn the bow of the steamer passes under a gaunt rock painted with the names of the warships which have visited Maskat for half a century, and enters the landlocked harbour. Twin fortresses erected by the Portuguese command the heights which overlook the town: the town itself clusters on the shore and climbs the high ground behind it, and itself is shut off from the Arabian desert by a stout wall on the landward side. Formerly Maskat was part of a domain which embraced Zanzibar, and the Islands of Kishm and Larak, with Bunder Abbas on the Persian shore. Zanzibar was separated from it by agreement, and the Persians succeeded in establishing their authority over the possessions on the eastern shore.

The relations between Britain and Maskat have been intimate for a century and more. It was under British auspices that the separation between Zanzibar and Maskat was effected, the Sheikh accepted a British subsidy in return for the suppression of the slave trade and in 1892 sealed his dependence upon us by concluding a treaty pledging himself not to cede any part of his territory without our consent. Foreign intrigues with Maskat did not commence until 1894, when the French, in pursuit of the pin-pricking policy through which they were avenging Egypt, and perhaps to assist Russia, established a consulate there. The Sultan was induced to cede to France a coaling station at Jissa, but this was such a clear violation of the Treaty of 1892 that it could not make good, and France had to accept the poor alternative of a leased depot. A more serious dispute arose over the use of the French flag to cover the slave trade. Native craft would secure the protection of the French flag by registering at Jibutil, and then defy the Sultan of Maskat, and they were enabled to traffic in slaves with impunity, inasmuch as there was rarely a French warship in the neighbourhood to search them. In April 1903 the trouble came to a head, and the French flagship Infernet was sent to Maskat to demand the release of dhows which had been arrested for a flagrant breach of the quarantine rules. This emphasised the necessity of a permanent settlement, and the question was referred to the Hague Tribunal, and a working compromise arranged. It was adjudged by the Hague tribunal in 1905 that "after January 2, 1892, France was not entitled to authorise vessels belonging to subjects of H. H. the Sultan of Maskat to fly the French flag," except on condition that their "owners or fitters-out had established, or should establish, that they had been considered and treated by France as her protégés before the year 1863," though "owners of dhows who before 1892 had been authorised by France to fly the French flag retained this authorisation as long as France renewed it to the grantee." The conclusion of the *entente* with France put an end to these pinpricks, but one important issue remained outstanding until 1914. France claimed under the Anglo-French Treaty of 1862 freedom of trade with Maskat. There was carried on for years a lucrative arms traffic with the Gulf, rifles and ammunition being shipped from Europe to Maskat, and thence distributed all over the littoral and even to the North-West Frontier of India. The extent of this evil compelled the British Government to intervene, and elaborate arrangements were made to check the traffic by arresting the dhows carrying arms and by harrying the gunrunners ashore. In effect, the British warships had to witness the dumping of cargoes on the shore at Maskat, see them loaded into dhows, and trust to their own vigilance to arrest these consignments on the high seas. Prompted by the Colonial Party, the French Government refused to yield one jot of their treaty rights, in the hope that Great Britain would buy them out by surrenders at Gambia. The difficulty was largely overcome by the establishment of a bonded warehouse for arms at Maskat, where all consignments have to be deposited, and whence they are only issued under certificates of destination; and by an agreement negotiated in 1914 the French Government recognised the new Arms Traffic Regulations and abandoned the privileges and immunities secured to them by Treaty. Compensation was paid by the British Government to those French merchants whose stocks were rendered valueless by the Regulations.

In 1873 jurisdiction was given to the Vice-Admiralty Court at Aden and the consuls within the dominions of Zanzibar, Maskat, and Madagascar for the more effectual suppression of the slave trade on the East Coast of Africa. By an Order-in-Council which came into force on August 1, 1914, the Act had been extended so as to comprise the Court established by the Persian Coast and Islands Order-in-Council, 1907. Thus the Consuls-General for Fars and the coasts and islands of the Persian Gulf will be able to enforce the suppression of the slave trade in that neighbourhood which was agreed to be desirable in a treaty made with the Persian Government so long ago as 1882.

The Sultans have been in a difficult position for a good many years. They hold their capital of Maskat, the adjacent town of Matra, one or two other coast towns, and certain points in the interior, but as they possess few troops they find themselves unable to control the roving Beduin who wander at will over most of the State. When the Beduin wanted money they were wont to ride down to Matra, the centre of the date trade, and threaten to sack the town. The late Sultan, who died in 1913, was generally compelled to bribe them to go away. The rising which began in 1913 was a more serious affair. A Pretender, Sheikh Abdullah, seized the inland town of Semail, which stands in a spacious fertile valley where are grown most of the dates for which Maskat is famous. Great Britain has special interests at Maskat, based upon various documents, the chief of which is

one drafted in 1891-2. The late Sultan asked us to protect him against the Pretender. We said we would protect his capital and coast, but could not send an expedition into the interior against the elusive Beduin. We sent Indian troops to Maskat, and they have been there ever since.

British Consul: Major L. B. H. Haworth.
Agency Surgeon, Vacant.

The Pirate Coast.

Turning Cape Musandim and entering the Gulf Proper, we pass the Pirate Coast, controlled by the six Trucial Chiefs. The ill-name of this territory has now ceased to have any meaning, but in the early days it had a very real relation to the actual conditions. The pirates were the boldest of their kind, and they did not hesitate to attack on occasion, and not always without success, the Company's ships of war. Large expeditions were fitted out to break their power, with such success that since 1820 no considerable punitive measures have been necessary. The Trucial Chiefs are bound to Great Britain by a series of engagements, beginning with 1806 and ending with the perpetual treaty of 1853 by which they bound themselves to avoid all hostilities at sea, and the subsequent treaty of 1873 by which they undertook to prohibit altogether the traffic in slaves. The relations of the Trucial Chiefs are controlled by the British Resident at Bushire, who visits the Pirate Coast every year on a tour of inspection. The German attempt to obtain a concession from the Sheikh of Shargarh has been mentioned. A more serious question arose in 1912 when a landing party from H. M. S. Fox, searching for contraband arms at Debai, was fired at by the resident Arabs and five men killed and nine wounded. The Sheikh made ample amends to the British Resident, and submitted to a fine. There was at first the suspicion that this *emeute* arose from the spread of pan-Islamism on the coast, studiously fostered from Constantinople, and that it indicated a weakening respect for British authority. But fuller enquiries tended to show that it arose from an unfortunate series of misunderstandings. The commercial importance of the Pirate Coast is increasing through the rise of Debai. Formerly Lingah was the entrepot for this trade, but the exactions of the Belgian Customs officials in the employ of Persia has driven this traffic from Lingah to Debai. The Trucial Chiefs are—Debai, Abu Thabee, Shargah, Ajman, Um-al-Gawain and Ras-el-Kheyma.

Bahrein.

North of the Pirate Coast lies the little Archipelago which forms the chiefship of the Sheikh of Bahrein. Of this group of islands only those of Bahrein and Maharak are of any size, but their importance is out of all proportion to their extent. This is the great centre of the Gulf pearl fishery, which, in a good year, may be worth half a million pounds sterling. The anchorage is wretched, and at certain states of the tide ships have to lie four miles from the shore, which is not even approachable by boats, and passengers, mails and cargo have to be landed in on the donkeys for which Bahrein is famous. But this notwithstanding the trade of the port is valued at over a million and a quarter sterling, and the customs revenue, which amounts to some eighty thousand pounds, makes the Sheikh the richest ruler in the Gulf.

Bahrein has passed through more than usually chequered experiences. Not the least formidable of these are the efforts of the Turks to threaten its independence. These took definite form in the third quarter of the last century, when Midhat Pasha, Vali of Basra, occupied the promontory of El Kater, as well as El Katif, over against Bahrein, and converted El Hasa into a district. The war with Russia put an end to these designs, but they were revived and the Turks at El Kater were a menace to Bahrein until the war diverted Turkish activities. The Sheikh by the treaty of 1861, entered into special engagements with the British Government, by whom his rights are guaranteed.

In the neighbourhood of Bahrein is the vast burying ground which has hitherto baffled archæologists. The generally accepted theory is that they are relics of the Phœnicians, who are known to have traded in these waters.

Political Agent: G. A. G. Mungavin.

Koweit.

In the north-west corner of the Gulf lies the port which has made more stir than any place of similar size in the world. The importance of Koweit lies solely in the fact that it is the one possible Gulf terminus of the Baghdad Railway. This is no new discovery, for when the Euphrates Valley Railway was under discussion, General Chesney selected it under the alternative name of the Grane—so called from the resemblance of the formation of the Bay to a pair of horns—as the sea terminus of the line. Nowhere else would Koweit be called a good or a promising port. The Bay is 20 miles deep and 5 miles broad, but so shallow that heavy expense would have to be incurred to render it suitable for modern ocean-going steamers. It is sheltered from all but the westerly winds and the clean thriving town is peopled by some 20,000 inhabitants, chiefly dependent on the sea, for the mariners of Koweit are noted for their boldness and hardihood.

The political status of Koweit would baffle the ingenuity of the international jurist to find a definition. Nominally the Sheikh owns allegiance to the Sultan of Turkey, from whom he has accepted the honorary title of Kaimakam or Local Governor. In practice, he has always been independent. In 1898, the Turks attempted to convert their nominal sovereignty into something more actual; but the Sheikh Mubarak approached the British Government and placed his interests under their special protection. When, however; the German surveyors earmarked Koweit for the terminus of their line, the position of the Sheikh was not directly attacked. To the north of Koweit there is a deep indentation in the lowlying shore, chiefly occupied by the swampy island of Bubyan. Here a long narrow channel runs up to Umm Khasa, the Khor Abdulla. It is sometimes held to be an alternative to Koweit as the Gulf Terminus, and with a view to earmarking it, the Turks have established military posts on Umm Khasa and on Bubyan Island. Threatened by domestic feuds, raids by sea, and attack by land ,Sheikh Mubarak, with a British

backing, has fended off all assaults on his position, and with realisation of the fact that Basra must, in any circumstances, be the commercial terminus of the Baghdad Railway, the importance of Koweit has tended to recede.

Political Agent, Captain P. G. Loch.

Muhammerah.

On the opposite side of the entrance to the Shatt-el-Arab lie the territories of a Sheikh who stands to the Persian Government in much the same relation as does the Sheikh of Koweit to the Government of Turkey—Sheikh Khazzal of Muhammerah. Nominally, he is subject to Teheran, on whose behalf he governs his territories as Governor; in practice he is more like a semi-independent vassal. In personal characteristics, too, Sheikh Khazzal has much in common with Mubarak; he has proved that he possesses many of the qualities of an administrator, and has resisted Persian encroachments on his authority in all directions save one—despite his strong antipathy to the agents of a centralised government, the Persians have installed an officer of their Belgian Customs service at Muhammerah. The town, favourably situated near the mouth of the Karun River, has grown in importance since the opening of the Karun River route to trade through the enterprise of Messrs. Lynch Brothers. This route provides the shortest passage to Ispahan and the central tableland, and already competes with the older route by way of Bushire and Shiraz. This importance has grown since the Anglo-Persian Oil Company established refineries at Muhammerah for the oil which they win in the rich fields which they have tapped near Ahwaz. Its importance will be still further accentuated, if the scheme for a railway to Khorremabad by way of Dizful features. A concession for a road by this route has long been held by a British Company, and surveys for a railway are being made. There is a tacit assurance from the Persian Government that if a practicable scheme is put forward, they will facilitate the work. Such a line, meeting the projected branch from Teheran to Dannikin, would intercept the trade of Central Persia and make Muhammerah the principal outlet for the commerce of the country. Sheikh Khazzal is believed to have formed an excellent working understanding with his brother chief across the water, and as the head of the great Kaab tribe he is no mean power in south-western Persia.

Vice Consul at Ahwaz, E. G. B. Peel.

Consul for Arabistan (*Muhammerah*), Asstt. Surgeon C. H. Lincoln.

Basra.

In a sense Basra and Turkish Arabistan can hardly be said to come within the scope of the frontiers of India, yet they are so indissolubly associated with the politics of the Gulf that they must be considered in relation thereto. Basra is the inevitable sea terminus of the Baghdad Railway. It stands on the Shatt-el-Arab, sixty miles from its mouth, favourably situated to receive the whole water-borne trade of the Tigris and Euphrates Rivers. This is already considerable, although Turkish obstruction has closed the Euphrates to navigation; as well as the Tigris above Baghdad—between Basra and Baghdad there were two services of river steamers, one controlled by Messrs. Lynch Brothers and the other by a Turkish Company. The local traffic is valuable for the richness of the date groves on either side of the Shatt-el-Arab is indescribable, there is a considerable entrepot traffic, whilst Basra is the port of entry for Baghdad and for the trade with Persia, which follows the caravan route *via* Kermanshah and Hamadan. When the Baghdad Railway is open, Basra must absorb the whole trade of the eastern zone, that is the trade which finds an easier outlet on the east than at Alexandrettan on the Mediterranean. That is without taking account of the possibilities of the irrigation scheme prepared by Sir William Willcocks, which should revive the glories of ancient Mesopotamia, and make Arabistan another Egypt. Even now ocean-going steamers trade regularly with Basra and load grain in bulk from its wharves. The one obstacle to the development of the port is the bar at the entrance to the Shatt-el-Arab, where there are no more than ten feet of water at low tide, and where steamers drawing more than sixteen to eighteen feet have, even at high tide, to discharge part of their cargoes into lighters before making the river. The cost of dredging the bar would not be large, and that done a first class port is almost ready made at Basra. Nothing can prevent it from becoming the port of the Middle East, and if ever the Baghdad Railway is extended to the Gulf, it will be for political not for commercial reasons.

Political Resident and H. M. Consul-General for Turkish Arabia (Baghdad), vacant.

Residency Surgeon and Assistant to the Resident, vacant.

British Consul, vacant.

The Persian Shore.

The Persian shore presents fewer points of permanent interest. The importance of Bushire is administrative rather than commercial. It is the headquarters of Persian authority, the residence of the British Resident, and the centre of many foreign consuls. It is also the main entrepot for the trade of Shiraz, and competes for that of Ispahan. But the anchorage is wretched and dangerous, the road to Shiraz passes over the notorious kotals which preclude the idea of rail connection, and if ever a railway to the central tableland is opened, the commercial value of Bushire will dwindle to insignificance. Further south lies Lingah, reputed to be the prettiest port on the Persian coast; but its trade is being diverted to Debai on the Pirate Coast. In the narrow channel which forms the entrance to the Gulf from the Arabian Sea is Bunder Abbas. Here we are at the key of the Gulf. Bunder Abbas is of some importance as the outlet for the trade of Kerman and Yezd. It is of still more importance as a possible naval base. To the west of the town between the Island of Kishm and the mainland, lie the Clarence Straits which narrow until they are less than three miles in width, and yet contain abundance of water. Here, according to sound naval opinion, there is the possibility of creating a naval base which would command the


CASPIAN SEA
Resht
Astrabad
Merv
Meshed
TEHERAN
KHORASAN
Kushk
KURDISTAN
Kasr-i-shirin
Kermanshah
Baghdad
LURISTAN
Birjand
AFGHANISTAN
Dizful
Ispahan
KUHISTAN
Yezd
ARABISTAN
Basra
Muhammerah
Kerman
Shiraz
KERMAN
ARABIA
PERSIAN GULF
Bushire
FARS
LARISTAN
Bandar Abbas.

Gulf. The great obstacle is the climate, which is one of the worst in the world. On the opposite shore, under the shadow of Cape Musandim, lies another sheltered deep-water anchorage, Elphinstone's Inlet, where the climate conditions are equally vile. But between these two points there is the possibility of controlling the Gulf just as Gibraltar controls the Mediterranean. For many years Bunder Abbas loomed large in public discussions as the possible warm water port for which Russia was seeking. Now it has reappeared in connection with the Trans-Persian railway. It is understood that the British Admiralty insist on that line meeting the sea at Bunder Abbas, where it would enter the British zone, and whence, along the Coast of Mekran, it would be commanded from the sea. The Russian concessionaires wish the line to strike the sea much further east either at the actual British frontier, Gwettur, or at Chahbar, where there are believed to be the makings of a deep-water port. So far the project has not passed beyond the stage of academic discussion. (q. v. Railways to India). On the Mekran coast, there is the cable station of Jask, and the possible port of Chahbar. The British Government temporarily occupied Bushire in 1915 in circumstances narrated in Persia (q. v.)

Political Resident in the Persian Gulf, Vacant, appointment held in abeyance.

Deputy Political Resident, J. H. H. Bill.

Residency Surgeon at Bushire, Major J. McPherson.

Consul at Bunder Abbas and Assistant to the Resident, W. R Howson.

Summary.

From this brief summary of the conditions in the Persian Gulf, it will be seen that the British position is a nebulous one. We have stamped out piracy, we have kept the peace, we have sought no exclusive privileges, the commerce of these waters is freely open to the ships of all nations. But this policy is in the main negative rather than positive; it is so barren of definite territorial achievements that it is singularly open to attack; it depends for its permanent success on the maintenance of the *status quo* in a part of the world where conditions are fast changing nor was it in any way regularised by the Anglo-Russian agreement. On the contrary, by that instrument the British zone stopped short at Bunder Abbas, the British sphere being restricted to the east of a line drawn from the Afghan frontier to Dazik, Birjand, Kerman and Bunder Abbas. All Persia between this line and the delimitation of the Russian zone by a line from Kasr-i-Shirin, Ispahan, Yezd, and Kakh, to the junction of the Persian Afghan, and Russian frontiers—that is to say the whole of the Persian Gulf littoral—is in the neutral zone. The Agreement made no mention of the Persian Gulf, but with the Convention a letter was published from Sir Edward Grey to the British Ambassador at Petrograd announcing that the Persian Gulf lay outside its scope, but that the Russian Government had stated during the negotiations that it did not deny the special interests of Great Britain in the Gulf and it was intimated that Great Britain reasserted them.

At the present time, of course, the politics of the Persian Gulf and of Turkish Arabistan are in a state of uncertainty owing to the war. Before the war broke out, active negotiations were conducted between the British, the Turkish and the German Governments with a view to the regularisation of the whole situation. On more than one occasion it was announced that they were on the verge of completion. The outline of these negotiations was that the Baghdad railway should proceed as far as Basra as a purely German-Turkish enterprise, but that it should not proceed beyond Basra without the approval of the British Government. Great Britain was to receive two directors on the Board to guard against differentiation of rates. The Sheikh of Koweit was to recognise the suzerainty of Turkey, but he was not to be interfered with, and Turkey was to accept the treaty of 1899. The Turkish post at El Kater, opposite to Bahrein was to be withdrawn.

All these considerations are now in the melting pot. There is no Turkish Empire; and even the province of Germany which we called Turkey is now anxious to break away from that connection without any power to stand by itself. The Persian Government has disappeared in all save name. There are preserved at Teheran all the forms and simulacra of government; but it has neither power nor authority. It was quite ineffectual to protect the country against the roving bands of Germans and scallywags who ravaged it in the early days of the war; order had to be restored first by the Russians and the British; where it exists now it is only through the presence of British and Indian soldiers. As soon as the threat of a Germano-Turk invasion of Persia became serious after the military collapse of Russia, Great Britain had to undertake the military protection of Persia. In the opinion of all competent to judge Persia requires years of careful guidance before she can possibly be competent to stand alone; it passes the wit of man to conceive the emergence of an ordered State from the confusion in Turkey. Meantime large British armies have established order in Mesopotamia and have vastly improved conditions in that province. One of the most difficult questions which will come before the Peace Conference will be the establishment of governments which ensure order in Turkey and Persia and with the future of those countries conditions on the Persian Gulf are intimately associated.

PERSIA.

The concentration of public attention on the Persian Gulf has been allowed to obscure the frontier importance of Seistan. Yet it has been a serious preoccupation with the Government of India. Seistan lies midway north and south between the point where the frontiers of Russia, Persia and Afghanistan meet at Zulfikar and that where the frontiers of Persia and of our Indian Empire meet on the open sea at Gwattur. It marches on its eastern

border with Afghanistan and with Baluchistan, it commands the valley of the Helmand, and with it the road from Herat to Kandahar, and its immense resources as a wheat-producing region have been only partly developed under Persian misrule It offers to an aggressive rival, an admirable strategic base for future military operations; it is also midway athwart the track of the shortest line which could be built to connect the Trans-Caspian Railway with the Indian Ocean, and if and when the line from Askabad to Meshed were built, the temptation to extend it through Seistan would be strong. Whilst the gaze of the British was concentrated on the North-West Frontier, and to possible lines of advance through Kandahar to Quetta, and through Kabul to Peshawar, there can be little doubt that Russian attention was directed to a more leisurely movement through Seistan, if the day came when she moved her armies against India.

Anglo-Russian Agreement.

Whether with this purpose or not, Russian intrigue was particularly active in Seistan in the early years of the century. Having Russified Khorassan, her agents moved into Seistan, and through the agency of the Belgian Customs officials, "scientific missions" and an irritating plague cordon, sought to establish influence, and to stifle the British trade which was gradually being built up by way of Nushki. These efforts died down before the presence of the McMahon mission, which, in pursuance of Treaty rights, was demarcating the boundary between Persia and Afghanistan, with special reference to the distribution of the waters of the Helmand. They finally ceased with the conclusion of the Anglo-Russian Agreement. Since then the international importance of Seistan has waned. Whether on account of the Agreement, which bars the line of advance through Seistan, or because of the discovery of an easier route, we cannot determine, but Russian activities in railway construction have been diverted to the Trans-Persian route, which would take a direct line through Teheran from Baku, and meet the Arabian Sea at Bunder Abbas or Chahbar.

The natural conditions which give to Seistan this strategic importance persist. Meantime British influence is being consolidated through the Seistan trade route. The distance from Quetta to the Seistan border at Killa Robat is 465 miles, most of it dead level, and it has now been provided with fortified posts, dak bungalows, wells, and all facilities for caravan traffic. The railway has been pushed out from Spezand, on the Bolan Railway to Nushki, so as to provide a better starting point for the caravans than Quetta. This railway has now to be extended into Seistan.

Text of the Agreement.

This Agreement, which aimed at an amicable settlement of all questions likely to disturb the friendly relations of the two countries in Asia generally, and in Persia, Afghanistan and Tibet in particular, was signed on August 31st, 1907, and officially communicated to the Powers in St. Petersburg on September 24. After reciting the desire of both Governments to maintain the integrity of Persia, and to allow all nations equal facilities for trade in that country, the Convention states that in certain parts, owing to their geographical proximity to their own territories, Great Britain and Russia have special interests. Accordingly (Art. I.): The north of a line drawn from Kasr-i-Shirin Isfahan, Yezd and Khakh to the junction of the Persian, Russian and Afghanistan frontier Great Britain agrees not to seek for itself or its own subjects or those of any other country any political or commercial concessions, such as railway, banking, telegraph, roads, transport or insurance, or to oppose the acquisition of such concessions by the Russian Government or its subjects. II. Russia gives a similar undertaking concerning the region to the south of a line extending from the Afghan frontier through Gazik, Birjand, Kerman and Bandar Abbas. III. Russia and Great Britain agree not to oppose, without previous agreement, the granting of concessions to subjects of either country in the regions situated between the lines above mentioned. All existing concessions in the regions above designated are maintained. IV. The arrangements by which certain Persian revenues were pledged for the payment of the loans contracted by the Shah's Government with the Persian Banque d'Escompte and the Prets and the Imperial Bank of Persia before the signing of the Convention are maintained. V. In the event of any irregularities in the redemption or service of these loans Russia may institute a control over the revenues situated within the zone defined by Article I. and Great Britain may do the same in the zone defined by Article II. But before instituting such a control the two Governments agree on a friendly exchange of ideas with a view to determining its nature, and avoiding any action in contravention of the principles of the Convention.

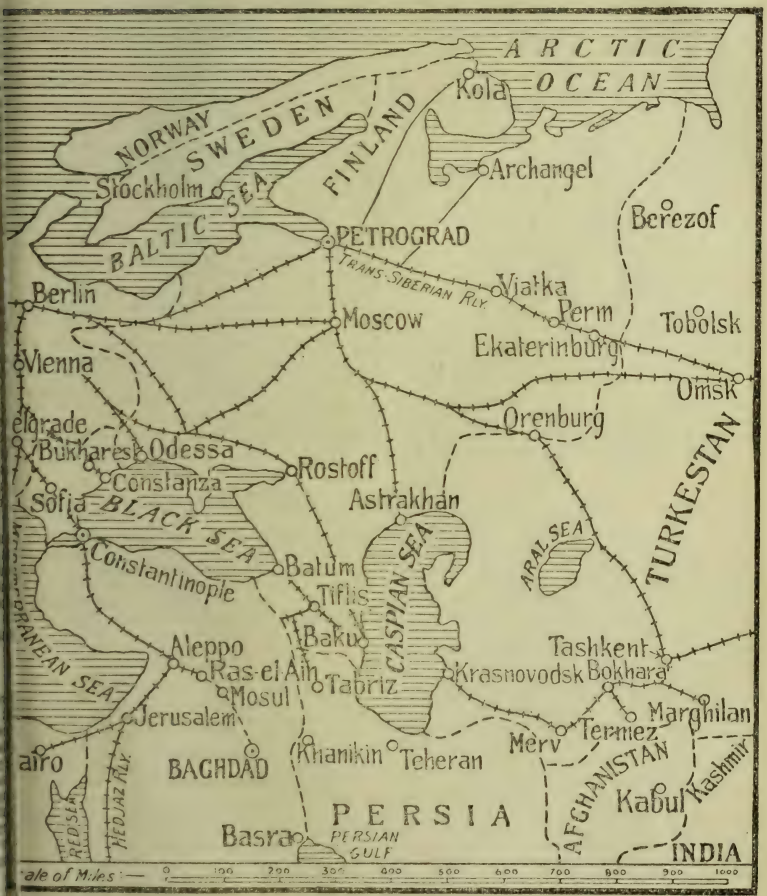
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Chaos in Persia.

Throughout War conditions in Persia have been extremely unsatisfactory. On the outbreak of the war the Persian Government assured the British Government of its neutrality and expressed the hope that the territory of Persia would not become the scene of hostilities. Nevertheless roving bands of German and Austrians, armed with rifles and machine guns, wandered through the country, trying to stir up trouble, and as was the case with Turkey, provoke Persia to take hostile action against the Allies.

These bands were suppressed when the Russian forces from Kasvin marched along the Teheran Baghdad road to link up with the British troops then moving up the Tigris towards Baghdad. But the misfortunes of this British force and the surrender of the garrison of Kut-al-Amara released two Turkish Divisions, who proceeded to establish themselves in and harry Western Persia. The scene changed again when General Maude's brilliant victories led to the capture of Baghdad. Cut off from their base on the

Railway Position in the Middle East.



Tigris the Turkish troops had to withdraw, followed by the Russians; they rejoined the main Turkish forces at Mosul. A strong Persian gendarmerie under Sir Percy Sykes marched through Southern Persia and established some species of order as far as Shiraz This was the position until the complete collapse of Russian military power and the conclusion of the Treaty of Brest Litovisk. The Germans made immediate provision to exploit this advantage by stirring up trouble on the frontiers of India.

Their way to foment these troubles lay partly through Persia and partly through Russian Turkestan. The most direct route from Europe to Persia is through Rostoff-on-Don in Southern Russia and then from Baku across the Caspian Sea to Enzeli, Resht and by way of a Russian carriage road to Teheran. There is another road from Julfa to Tabriz, in Azerbaijan and thence to Teheran. On the Trans-Caspian line a short road from Askabad leads to Meshed in Eastern Persia. Farther east the Trans-Caspian railway presents two points d'appui for an attack on Northern Afghanistan—towards Herat from the Kushklinsky Post and down the valley of the Termes. It was the policy of Germany to seize the railway from Batum to Baku; to secure control of the Caspian flotilla; and then to establish herself on the line of the Trans-Caspian railway. In this she had the active co-operation of Turkey.

In the early part of 1918 Germany secured control of Southern Russia and of Batum and converted the Black Sea into a German lake. A British force proceeding from Baghdad *via* Kasvin temporarily occupied Baku; but i work having been accomplished it withdre and the Germans and Turks seized the tow The Turks occupied and ravaged Tabriz. B that represented the high-water mark of the operations. General Allenby's brilliant victori in Palestine compelled the Turks to withdra their Divisions from the Caucasus. The activi of Armenian forces seriously prejudiced th position at Tabriz. The complete success the Czecho-Slovaks in Siberia, with the assi ance of the Allies, expelled the Bolsheviks, wi whom the German prisoners in Siberia we acting, from Siberia east of the Upper Vol and cut the enemy off from the Orenbu Tashkent railway. The Nushki railway w pushed out from Nushki to the Persian fronti British troops occupied various strategic poir in Persia. But in all these measures to mainta order and protect the country the Persi Government had no part; it remained helpl at Teheran whilst the work was done by othe There is really no government in Persia; o the pale figment of authority outside the p sence of the British troops. It lies with t Allies to decide in the final adjustment wi form of authority shall be established this vexed and chaotic land.

H. B. M.'s Consul General and Agent of Government of India in Khorasan:—Lieu Colonel W. G. Grey.

H. B. M.'s Consul in Sistan and Kain:—Lt.-C F. B. Prideaux, C.I.E.

Medical Officer and Vice-Consul:—Major Heron, I.M.S.

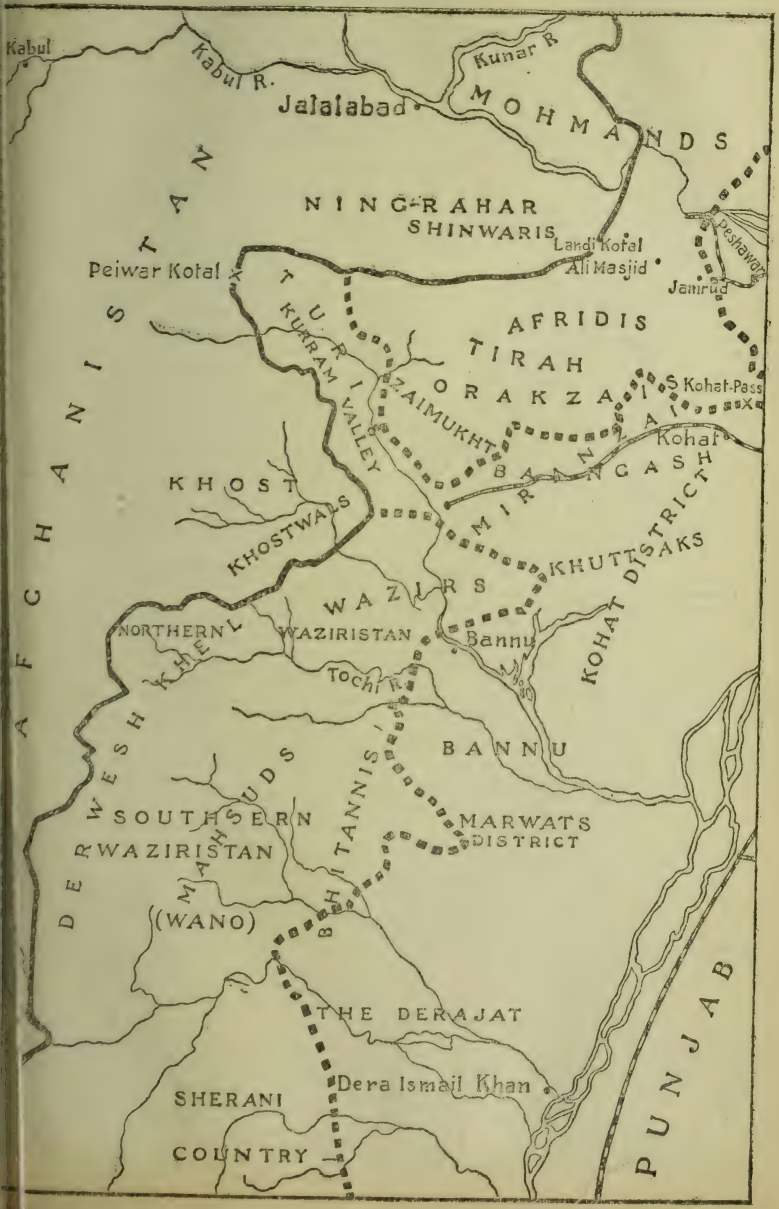
THE INDEPENDENT TERRITORY.

There yet remains a small part of British India where the King's writ does not run. Under what is called the Durand Agreement with the Amir of Afghanistan, the boundary between India and Afghanistan was settled, and it was delimited in 1903. But the Government of India have never occupied up to the border. Between the administered territory and the Durand line there lies a belt of territory of varying width, extending from the Gomal Pass in the south, to Kashmir in the north; this is generically known as the Independent Territory. Its future is the keynote of the interminable discussions of frontier policy for nearly half a century.

This is a country of deep valleys and secluded glens, which nature has fenced in with almost inaccessible mountains. It is peopled with wild tribes of mysterious origin, in whom Afghan, Tartar, Turkoman, Persian, Indian, Arab and Jewish intermingle. They had lived their own lives for centuries, with little intercourse even amongst themselves, and as Sir Valentine Chirol truly said "the only bond that ever could unite them in common action was the bond of Islam." It is impossible to understand the Frontier problem unless two facts are steadily borne in mind. The strongest sentiment amongst these strange people is the desire to be left alone. They value their independence much more than their lives. The other factor is that the country does not suffice even in good years to maintain the population. They must find the means of s sistence outside, either in trade, by service the Indian Army or in the Frontier Milit or else in the outlet which hill-men all the wo over have utilised from time immemorial, raiding of the wealthier and more peace population of the Plains.

Frontier Policy.

The policy of the Government of India ward the Independent Territory has ebb and flowed in a remarkable degree. It fluctuated between the Forward School, wh would occupy the frontier up to the confi of Afghanistan, and the school of Maste Inactivity, which would leave the tribes entirely to their own resources, punish them only when they raided British territ Behind both the policies lay the menace o Russian invasion, and that coloured our fr tier policy until the Anglo-Russian Agreem This induced what was called Hit and Re tactics; in the half century which ended 1897 there were nearly a score of punitive peditions, each one of which left behind legacy of distrust, and which brought no manent improvement in its train. The f of the suspicion thus engendered was seen 1897. Then the whole Frontier, from Malakand to the Gomal, was ablaze. The tent of this rising and the magnitude of military measures which were taken to n it compelled a consideration of the whole p


Kabul
Kabul R.
Jalalabad
Kunar R.
MOHMANDS
NINGRAHAR
SHINWARIS
Landi Kotal
Ali Masjid
Peshawar
Jamrud
Peiwar Kotal
AFRIDIS
TIRAH
ORAKZAI
Kohat Pass
Kohat
KURRAM VALLEY
ZAIMUKHT
BANGASH
KHOST
KHOSTWALS
MIR
KHUTTAKS
KOHAT DISTRICT
WAZIRS
NORTHERN WAZIRISTAN
Bannu
Tochi R.
KURRAM R.
BANNU
SOUTHERN WAZIRISTAN
MARWATS
DISTRICT
(WANO)
THE DERAJAT
Dera Ismail Khan
SHERANI
COUNTRY
PUNJAB
AFGHANISTAN
DERWESHKHEL
MAHSUDS
BHITANNIS

tion. The broad outlines of the new policy were laid down in a despatch from the Secretary of State for India, which prescribed for the Government the "limitation of your interference with the tribes, so as to avoid the extension of administrative control over tribal territory." It fell to Lord Curzon to give effect to this policy. The main foundations of his action were to exercise over the tribes the political influence requisite to secure our imperial interests, to pay them subsidies for the performance of specific duties, but to respect their tribal independence and leave them, as far as possible, free to govern themselves according to their own traditions and to follow their own inherited habits of life without let or hindrance.

New Province.

As a first step Lord Curzon took the control of the tribes under the direct supervision of the Government of India. Up to this point they had been in charge of the Government of the Punjab, a province whose head is busied with many other concerns. Lord Curzon created in 1901, the North-West Frontier Province, and placed it in charge of a Chief Commissioner with an intimate frontier experience, directly subordinate to the Government of India. This was a revival of a scheme prepared by Lord Lytton in 1877, and often considered afterwards, but which had slipped for lack of driving power. Next Lord Curzon withdrew the regular troops so far as possible from the advanced posts, and placed these fortalices in charge of tribal levies, officered by a handful of British officers. The most successful of these is the Khyber Rifles, which have steadfastly kept the peace of that historic Pass. At the same time the regular troops were cantoned in places whence they could quickly move to any danger point, and these bases were connected with the Indian Railway system. In pursuance of this policy frontier railways were run out to Dargai, and a narrow-gauge line, since converted to the broad-gauge, was constructed from Kushalgarh to Kohat at the entrance of the Kohat Pass, and to Thal at the mouth of the Kurram Valley. These railways have been completed by lines to Tonk and Bannu. By this means the striking power of the regular forces was greatly increased. Nor was the policy of economic development neglected. The railways gave a powerful stimulus to trade, and the Lower Swat Canal converted fractious tribesmen into successful agriculturists. This policy of economic development is receiving a great development through the completion of the Upper Swat Canal (*q. v.* Irrigation). Now it is completed there are other works awaiting attention.

Greater Peace.

So far this policy has been completely justified by results. During Lord Curzon's Viceroyalty there was no frontier expedition. The recalcitrancy of the Mahsud Waziris necessitated punitive measures, but they took the form of a blockade. Critics have declared that the blockade was scarcely distinguishable from an expedition, but that is a secondary matter. It was not until 1908 that the peace of the border was directly disturbed, and then the continued recalcitrancy of the Zakka Kh sept of the great Afridi tribe compelled th Government to take action. General Wil cocks, moving swiftly down the Chura Pas and Colonel Roos-Keppel taking the Khybe Rifles down the Bazar Valley inflicted suc condign punishment on them that they wer glad to accept terms of peace negotiated b the main Afridi tribe. A month later, actio was necessary against the Mohmands. I this case the rebellious tribesmen were activel supported by Afghan levies, assembled an fitted out in Afghan territory at Lalpura. Tw brigades entered their country and defeate them. There was a diversion when Ishaka numbering nearly twenty thousand move up from Afghanistan and threatened the Br tish post of Landi Kotal in the Khyber. The too were driven back into Afghan territor and the trouble was at an end. The Ami who had been strangely quiescent, asserte his authority and the irregular warfare wage from Afghan territory ceased.

Policy Justified.

These expeditions have been seized upo by critics to condemn the present policy. The justify it. Thanks to the confidence engen dered by ten years of non-aggression, the di turbed area was localised, the Khyber w kept open, the Afridis lent their aid in conclu ing peace. For these reasons, when the Go ernment of India proposed the occupatio of further strategical points in order to contr the Zakka Khels, the Secretary of State wise imposed his embargo. The strength of th position was still further demonstrated wh in 1910 the tribesmen suffered heavy loss in consequence of measures to suppress th arms traffic (*q. v.* Gun-running). The frontier always in a state of suppressed ferment No one knows what will happen to-morro But the tribesmen, feeling confident in t knowledge that no attack on their indepen ence is contemplated and growing richer consequence of the development of trade an agriculture, are more easily handled. Wi the removal of the Russian menace, or rath its transference to Persia, the importance the North-West Frontier has tended to su side. There are still heard mutterings of t necessity for a reversion to the forward polic and for the occupation of the Independe Territory right up to the Durand line. B they are not regarded seriously. The tribe men are so saturated with rifles and ammu tion, as the result of importations from t Persian Gulf, that the task would be long a costly. When it was achieved the front problem would only have shifted. Inste of a frontier against the Independent tribesme India would have a frontier against Afghan tan, and the problem would still be presen only in an aggravated form.

The Frontier and the War.

The history of the Frontier during the w is one of sporadic unrest; but that is its norm history. There was however only one expe tion, that of 1917 against the most troub some tribe on the whole Frontier, the Mahsu whose cup of iniquity was overflowing. The disturbances are fully described in the Indi Year Book for 1917 (pp. 154, 155, 156). B

in May of this year, when the effects of the German and Turkish machinations in Central Asia had had time fully to manifest themselves, the Chief Commissioner of the North-West Frontier Province was able to say that "as regards the Tribes, the Frontier has been quieter since the outbreak of the war than it was for the four years before it, and you have seen yourselves that in spite of the pre-occupations of Government they have not hesitated to go to great expense in men and money to guard the Peshawar border against the depredations of the Mohmands and the Derajat border against the incursions of the Mahsuds." The most active manifestation of discontent came farther west, from a part of the Frontier which is regarded as comparatively immune to disturbance. The Marris, one of the tribes in eastern Baluchistan, went on a raiding expedition and temporarily interrupted traffic on the Hurnai railway. A small column went into their country and they were sharply punished.

AFGHANISTAN.

The relations of Afghanistan with the Indian Empire were dominated by one main consideration—the relation of Afghanistan to a Russian invasion of India. All other considerations were of secondary importance. For nearly three-quarters of a century the attitude of Great Britain toward successive Amirs has been dictated by this one factor. It was in order to prevent Afghanistan from coming under the influence of Russia that the first Afghan War of 1838 was fought—the most melancholy episode in Indian frontier history. It was because a Russian envoy was received at Kabul whilst the British representative was turned back at Ali Masjid that the Afghan War of 1878 was waged. Since then the whole end of British policy toward Afghanistan has been to build up a strong independent State, friendly to Britain, which would act as a buffer against Russia, and so to order our frontier policy that we should be in a position to move large forces up, if necessary, to support the Afghans in resisting aggression.

Gates to India.

A knowledge of the trans-frontier geography of India brought home to her administrators the conviction that there were only two main gates to India—through Afghanistan, the historic route to India, along which successive invasions have poured, and by way of Seistan. It has been the purpose of British policy to close them, and of Russia to endeavour to keep them at any rate half open. To this end having pushed her trans-Persian railway to Samarkand Russia thrust a military line from Merv to the Kushklinsky Post, where railway material is collected for its immediate prolongation to Herat. Later, she connected the trans-Siberian railway with the trans-Caucasian system, by the Orenburg-Tashkent line, thus bringing Central Asia into direct touch with Her European magazines. Nor has Great Britain been idle. A great military station has been created at Quetta. This is connected with the Indian railway system by lines of railway which climb to the Quetta plateau by the Bolan Pass and through the Chappar Rift, lines which rank amongst the most picturesque and daring in the world, from Quetta the line has been carried by the Khojak tunnel through the Khwaja Amran range, until it leads out to the Afghan Border at New Chaman, where it opens on the route to Kandahar. The material is stocked at New Chaman which would enable the line to be carried to Kandahar in sixty days. In view of the same menace th whole of Baluchistan has been brought under British control. Quetta is now one of the great strategical positions of the world, and nothing has been left undone which modern military science can achieve to add to its natural strength. In the opinion of many military authorities it firmly closes the western gate to India, either by way of Kandahar, or the direct route through Seistan.

Further east the Indian railway system has been carried to Jamrud, at the entrance to the Khyber Pass. A first class military road, sometimes double, sometimes treble, threads the Pass to our advanced post at Landi Kotal, and then descends until it meets the Afghan frontier at Tor Khum. Later, a commencement was made with the Loi Shilman Railway, which, starting from Peshawar, was designed to penetrate the Mullagori country and provide an alternative advance to the Khyber for the movement of British troops for the defence of Kabul. For unexplained reasons; this line was suddenly stopped and is now thrust in the air. In this wise the two Powers prepared for the great conflict which was to be fought on the Kandahar-Ghazni-Kabul line.

Relations with India.

Between the advanced posts on either side stands the Kingdom of Afghanistan. The end of British policy has been to make it strong and friendly. In the first particular it has largely succeeded. When the late Abdurrahaman was invited to ascend the throne; as the only means of escape from the tangle of 1879, none realised his great qualities. Previously the Amir of Afghanistan had been the chief of a confederacy of clans. Abdurrahaman made himself master in his own kingdom. By means into which it is not well closely to enter, he beat down opposition until none dared lift a hand against him. Aided by a British subsidy of twelve lakhs of rupees a year, increased to eighteen by the Durand Agreement of 1893, he established a strong standing army and set up arsenals under foreign supervision to furnish it with arms and ammunition. Step by step his position was regularised. The Anglo-Russian Boundary Commission,—which nearly precipitated war over the Penjdeh episode in 1885,—determined the northern boundaries. The Pamirs Agreement delimited the borders amid those snowy heights. The Durand Agreement settled the border on the British side. Finally the McMahon award closed the old feud with Persia over the distribution of the waters of the Helmand in Seistan. It was estimated by competent authorities that about the time of Abdurrahaman's death; Afghanistan was in a position to place in the field, in the event of war, one hundred thousand well-armed regular and irregular troops, together with two hundred thousand tribal levies; and to leave fifty thousand regulars and irregulars and a hundred thousand levies to

maintain order in Kabul and the provinces. But if Afghanistan were made strong, it was not made friendly. Abdurrahaman Khan distrusted British policy up to the day of his death. All that can be said is that he distrusted it less than he distrusted Russia, and if the occasion had arisen for him to make a choice, he would have opposed a Russian advance with all the force at his disposal. He closed his country absolutely against all foreigners, except those who were necessary for the supervision of his arsenals and factories. He refused to accept a British Resident, on the ground that he could not protect him, and British affairs have been entrusted to an Indian agent, who is in a most equivocal position. At the same time he repeatedly pressed for the right to pass by the Government of India and to establish his own representative at the Court of St. James.

Position To-day.

It used to be one of the commonplaces of Indian discussion that the system which Abdurrahaman Khan had set up would perish with him, because none other was capable of maintaining it. Abdurrahaman Khan died in 1901. His favourite son, Habibullah, who had been gradually initiated into the administration peacefully succeeded him, and has since peacefully retained his seat on the throne. He concluded in 1905 the Dane Treaty, by which he accepted the same obligations on the same terms as his father. He visited India in 1907, and apparently both enjoyed and profited by his experiences. Since then the purdah which screens Afghanistan has been lifted so little that there is no definite knowledge of what has passed behind it.

Immediately on the outbreak of the war His Majesty the Amir declared his strict neutrality, and that pledge he straitly observed. To those unacquainted with the difficulties of this Ruler some things occurred which it was not easy to understand. A German and Austrian mission was admitted to Kabul; several Turkish emissaries were entertained; and more than one representative of the revolutionary movement in India was permitted to roam the country. But the Amir has to reckon with the fanatical and ignorant forces in his own country. With the most sincere desire loyally to act up to his pledge of neutrality, he could not entirely ignore the forces in Afghanistan which, ignorant of the strength of the British Empire were willing to lend a ready ear to the preachings of a jihad, or holy war of Islam. By degrees the Amir took matters into his own hand; the anti-British emissaries were gradually expelled. And when in 1918 Germany, with the Turks as her Islamic tools, prepared to stir up trouble in Afghanistan, with a view to diverting the energies of the British Government to the North-West frontier, the Amir took vigorous steps to maintain his authority and declared that no foreign troops, no matter what their nationality or religion, should be allowed to traverse Afghan territory. The year closed with the position of the Amir, and his own authority, more firmly established than ever.

TIBET.

Recent British policy in Tibet is really another phase in the long-drawn-out duel between Great Britain and Russia in Central Asia. The earliest efforts to establish communication with that country were not, of course, inspired by this apprehension. When in 1774 Warren Hastings despatched Bogle on a mission to the Tashi-Lama of Shigatse,—the spiritual equal, if not superior, of the Dalai Lama of Lhasa—his desire was to establish facilities for trade, to open up friendly relations with a Power which was giving us trouble on the frontier, and gradually to pave the way to a good understanding between the two countries. After Warren Hasting's departure from India the subject slept, and the last Englishman to visit Lhasa, until the Younghusband Expedition of 1904, was the unofficial Manning. In 1885, under the inspiration of Colman Macaulay, of the Bengal Civil Service, a further attempt was made to get into touch with the Tibetans, but it was abandoned in deference to the opposition of the Chinese, whose suzerainty over Tibet was recognised, and to whose views until the war with Japan, British statesmen were inclined to pay excessive deference. But the position on the Tibetan frontier continued to be most unsatisfactory. The Tibetans were aggressive and obstructive, and with a view to putting an end to an intolerable situation, a Convention was negotiated between Great Britain and China in 1890. This laid down the boundary between Sikkim and Tibet, it admitted a British protectorate over Sikkim, and paved the way for arrangements for the conduct of trade across the Sikkim-Tibet frontier. These supplementary arrangements provided for the opening of a trade mart at Yatung, on the Tibetan side of the frontier to which British subjects should have the right of free access, and where there should be no restrictions on trade. The agreement proved useless in practice, because the Tibetans refused to recognise it, and despite their established suzerainty, the Chinese Government were unable to secure respect for it.

Russian Intervention.

This was the position when in 1899 Lord Curzon, Viceroy of India, endeavoured to get into direct touch with the Tibetan authorities. Three letters which he addressed to the Dalai Lama were returned unopened, at a time when the Dalai Lama was in direct intercourse with the Tsar of Russia. His emissary was a Siberian Dorjieff, who had established a remarkable ascendancy in the counsels of the Dalai Lama. After a few years' residence at Lhasa Dorjieff went to Russia on a confidential mission in 1899. At the end of 1900 he returned to Russia at the head of a Tibetan mission, of which the head was officially described in Russia as "the senior Tsanite Khomboi attached to the Dalai Lama of Tibet." This mission arrived at Odessa in October 1900 and was received in audience by the Tsar at Livadia. Dorjieff returned to Lhasa to report progress, and in 1901 was at St. Petersburg with a Tibetan mission, where as bearers of an autograph letter from the Dalai Lama they were received by the Tsar at Peterhoff. They were escorted home through Central Asia by a Russian force to which several Intelligence Officers were attached. At the time it was

rumoured that Dorjieff had, on behalf of the Dalai Lama, concluded a treaty with Russia, which virtually placed Tibet under the protectorate of Russia. This rumour was afterwards officially contradicted by the Russian Government.

The Expedition of 1904.

In view of these conditions the Government of India, treating the idea of Chinese suzerainty over Tibet as a constitutional fiction, proposed in 1903 to despatch a mission, with an armed escort, to Lhasa to discuss the outstanding questions with the Tibetan authorities on the spot. To this the Home Government could not assent, but agreed, in conjunction with the Chinese Government, to a joint meeting at Khamba Jong, on the Tibetan side of the frontier. Sir Francis Younghusband was the British representative, but after months of delay it was ascertained that the Tibetans had no intention of committing themselves. It was therefore agreed that the mission, with a strong escort, should move to Gyantse. On the way the Tibetans developed marked hostility, and there was fighting at Tuna, and several sharp encounters in and around Gyantse. It was therefore decided that the mission should advance to Lhasa, and on August 3rd, 1904, Lhasa was reached. There Sir Francis Younghusband negotiated a convention by which the Tibetans agreed to respect the Chinese Convention of 1890; to open trade marts at Gyantse, Gartok and Yatung; to pay an indemnity of £500,000 (seventy-five lakhs of rupees); the British to remain in occupation of the Chumbi Valley until this indemnity was paid off at the rate of a lakh of rupees a year. In a separate instrument the Tibetans agreed that the British Trade Agent at Gyantse should have the right to proceed to Lhasa to discuss commercial questions, if necessary.

Home Government intervenes.

For reasons which were not apparent at the time, but which have since been made clearer, the Home Government were unable to accept the full terms of this agreement. The indemnity was reduced from seventy-five lakhs of rupees to twenty-five lakhs, to be paid off in three years, and the occupation of the Chumbi Valley was reduced to that period. The right to despatch the British Trade Agent to Lhasa was withdrawn. Two years later (June 1906) a Convention was concluded between Great Britain and China regulating the position in Tibet. Under this Convention Great Britain agreed neither to annex Tibetan territory, nor to interfere in the internal administration of Tibet. China undertook not to permit any other foreign State to interfere with the territory or internal administration of Tibet. Great Britain was empowered to lay down telegraph lines to connect the trade stations with India, and it was provided that the provisions of the Convention of 1890, and the Trade Regulations of 1893, remained in force. The Chinese Government paid the indemnity in three years and the Chumbi Valley was evacuated. The only direct result of the Mission was the opening of the three trade marts and the establishment of a British Trade Agent at Gyantse.

The Anglo-Russian Agreement.

The reason underlying the action of the British Government in modifying, in such material particulars, the Convention of Lhasa was apparent later. The Anglo-Russian Agreement was in process of negotiation, and under that Agreement Great Britain was pledging herself not to annex any portion of Tibetan territory, nor to send a representative to Lhasa. A seventy-five year occupation of the Chumbi Valley would have been indistinguishable from annexation. The portions of the Anglo-Russian Agreement which relate to Tibet are as follows:—

Article I.—The two High Contracting Parties engage to respect the territorial integrity of Tibet and to abstain from all interference in its internal administration.

Article II.—In accordance with the admitted principle of the suzerainty of China over Tibet, Great Britain and Russia engage not to enter into negotiations with Tibet, except through the intermediary of the Chinese Government. This engagement does not exclude the direct relations between the British Commercial Agents and the Tibetan authorities, provided for in Article V of the Convention between Great Britain and Tibet of the 7th September, 1904, and confirmed by the Convention between Great Britain and China of the 27th April 1906; nor does it modify the engagements entered into by Great Britain and China in Article I of the said Convention of 1906.

It is clearly understood that Buddhists, subjects of Great Britain or of Russia, may enter into direct relations on strictly religious matters with the Dalai Lama, and the other representatives of Buddhism in Tibet: the Governments of Great Britain and Russia engage, as far as they are concerned, not to allow those relations to infringe the stipulations of the present arrangement.

Article III.—The British and Russian Governments, respectively, engage not to send Representatives to Lhasa.

Article IV.—The two High Contracting Parties engage neither to seek nor to obtain, whether for themselves or for their subjects any concessions for railways, roads, telegraphs and mines, or other rights in Tibet.

Article V.—The two Governments agree that no part of the revenues of Tibet, whether in kind or in cash, shall be pledged or assigned to Great Britain or Russia or to any of their subjects.

Annexed to the Agreement was a re-affirmation of the declaration for the evacuation of the Chumbi Valley after the payment of three annual instalments of the indemnity, provided that the trade marts had been effectively opened for three years and that the Tibetans had complied in all respects with the terms of the Treaty.

Chinese Action.

The sequel to the Anglo-Russian Agreement was dramatic, although it ought not to have been unexpected. On the approach of the Younghusband Mission the Dalai Lama fled to Urga, the sacred city of the Buddhists in Mongolia. He left the internal government of Tibet in confusion, and one of Sir Francis Younghusband's great difficulties was to find Tibetan officials who would undertake the responsibility of signing the Treaty. Now the suzerainty of China over Tibet had been explicitly reaffirmed. It was asserted that she

would be held responsible for the foreign relations of Tibet. In the past this suzeraints, having been a "constitutional fiction," it was inevitable that China should take steps to see that she had the power to make her will respected at Lhasa. To this end she proceeded to convert Tibet from a vassal state into a province of China. In 1908 Chao Erh-feng, acting Viceroy in the neighbouring province of Szechuen, was appointed Resident in Tibet. He proceeded gradually to establish his authority, marching through eastern Tibet and treating the people with great severity. Meantime the Dalai Lama, finding his presence at Urga, the seat of another Buddhist Pontiff, irksome, had taken refuge in Si-ning. Thence he proceeded to Peking, where he arrived in 1908, was received by the Court, and despatched to resume his duties at Lhasa. Moving by leisured stages, he arrived there at Christmas 1909. But it was soon apparent that the ideas of the Dalai Lama and of the Chinese Government had little in common. The Dalai Lama expected to resume the temporal and spiritual despotism which he had exercised prior to 1904. The Chinese intended to deprive him of all temporal power and preserve him as a spiritual pope. The Tibetans had already been exasperated by the pressure of the Chinese soldiery. The report that a strong Chinese force was moving on Lhasa so alarmed the Dalai Lama that he fled from Lhasa, and by the irony of fate sought a refuge in India. He was chased to the frontier by Chinese troops, and took up his abode in Darjeeling, whilst Chinese troops overran Tibet.

Later Stages.

The British Government, acting on the representations of the Government of India, made strong protests to China against this action. They pointed out that Great Britain, while disclaiming any desire to interfere with the internal administration of Tibet, could not be indifferent to disturbances in the peace of a country which was a neighbour, on intimate terms with other neighbouring States on our frontier, especially with Nepal, and pressed that an effective Tibetan Government be maintained. The attitude of the Chinese Government was that no more troops had been sent to Tibet than were necessary for the preservation of order, that China had no intention of converting Tibet into a province, but that being responsible for the good conduct of Tibet, she must be in a position to see that her wishes were respected by the Tibetans. Finally, the Chinese remarked that the Dalai Lama was such an impossible person that they had been compelled again to depose him. Here the matter might have rested, but for the revolution in China. That revolution broke out in Szechuen, and one of the first victims was Chao Erh-feng. Cut off from all support from China, surrounded by a hostile and infuriated populace, the Chinese troops in Tibet were in a hopeless case; they surrendered, and sought escape not through China, but through India, by way of Darjeeling and Calcutta. The Dalai Lama returned to Lhasa, and in 1913, in the House of Lords on July 28, Lord Morley stated the policy of the British Government in relation to these changes. He said the declaration of the President of the Chinese Republic saying that Tibet came within the sphere of Chinese internal administration; and that Tibet was to be regarded as on an equal footing with other provinces of China, was met by a very vigorous protest from the British Government. The Chinese Government subsequently accepted the principle that China is to have no right of active intervention in the internal administration of Tibet, and agreed to the constitution of a conference to discuss the relation of the three countries. This Convention met at Simla when Sir Henry McMahon, Foreign Secretary to the Government of India; Mr. Ivan Chen, representing China; and Mr. Long Chen Shatra, Prime Minister to the Dalai Lama, threshed out these issues. Whilst no official pronouncement has been made on the subject, it is understood that a Convention was initialled in June which recognised the complete autonomy of Tibet proper, with the right of China to maintain a Resident at Lhasa with a suitable guard. A semi-autonomous zone was to be constituted in Eastern Tibet, in which the Chinese position was to be relatively much stronger. But this Convention, it is understood, has not been ratified by the Chinese Government, owing to the difficulty of defining Outer and Inner Tibet, and in 1918 Tibet threw off the last vestiges of Chinese Suzerainty.

Political Importance of Tibet.

The political importance of Tibet in relation to India has of necessity been changed by the Anglo-Russian Agreement. So long as that instrument is in force, it tends to decline. But no treaties are everlasting. The question has been admirably summed up by Sir Valentine Chirol ("The Middle Eastern Question") written before the Agreement was reached. "What it would be impossible to view without some concern," he wrote, "would be the ascendance of a foreign and possibly hostile power at Lhasa, controlling the policy of a great politico-religious organisation whose influence can and does make itself appreciably felt all along the north-eastern borderland of India. Lhasa is the stronghold of Lamastic Buddhism, a debased form of Buddhism largely overgrown with tantric philosophy—Lhasa is in fact the Rome of Central Asian Buddhism, and the many-storied Po-ta-la on the hill to the west of the city is its Vatican, whence its influence radiates throughout innumerable lamaseries or Buddhist monasteries, not only into Turkestan and Mongolia and Western China, but across the Himalayas into the frontier States of our Indian Empire. Corrupt and degraded as it is, it is still unquestionably a power, and just because it is corrupt and degraded it might lend itself more readily to become for a consideration the tool of Russian ambitions.....Tibet as a Russian dependency would, at any rate no longer be a *quantite negligeable*, and our north-eastern frontier, naturally formidable as it is, would require to be watched, just as every civilised country has to watch its frontiers, whatever they may be, where they march with a powerful neighbour, and most of all in India, where our frontier is fringed with semi-independent Native States, over which our authority is conditioned mainly on the hitherto unrivalled prestige of our Imperial power in Asia."

British Trade Agent, Yatung.—D. Macdonald.
British Trade Agent, Gyantse.—Major W. J. Campbell.

THE NORTH-EASTERN FRONTIER.

The position on the northern frontier has been considered as if the British line were contiguous with that of Tibet. This is not so. The real frontier States are Kashmir, Nepal, Sikkim and Bhutan. From Chitral to Gilgit, now the northernmost posts of the Indian Government, to Assam, with the exception of the small wedge between Kashmir and Nepal, where the British district of Kumaon is thrust right up to the confines of Tibet, for a distance of nearly fifteen hundred miles there is a narrow strip of native territory between British India and the true frontier. The first of these frontier States is Kashmir. The characteristics of this State are considered under Native States (*q.v.*); it is almost the only important Native State in India with frontier responsibilities, and it worthily discharges them through the agency of its efficient Imperial Service troops—four regiments of infantry and two Mountain Batteries, composed mainly of the Rajput Dogras, who make excellent fighting material. One of the most important trade routes with Tibet passes through Kashmir—that through Ladak. Then we come to the long narrow strip of Nepal. This Gurkha State stands in special relations with the British Government. It is for all practical purposes independent, and the British resident at Khatmandu exercises no influence on the internal administration. The governing machine in Nepal is also peculiar. The Maharaj Dhiraj, who comes from the Sesodia Rajput clan, the bluest blood in India, takes no part in the administration. All power vests in the Prime Minister, who occupies a place equivalent to that of the Mayors of the Palace, or the Shoguns of Japan. The present Prime Minister, Sir Chandra Shamsher, has visited England, and has given conspicuous evidence of his attachment to the British Government. Nepal is the main Indian outpost against Tibet, or against Chinese aggression through Tibet. The friction between the Chinese and the Nepalese used to be frequent, and in the eighteenth century the Chinese marched an army to the confines of Khatmandu—one of the most remarkable military achievements in the history of Asia. Under the firm rule of the present Prime Minister Nepal has been largely free from internal disturbance, and has been raised to a strong bulwark of India. Nepal is the recruiting ground for the Gurkha Infantry, who form such a splendid part of the fighting arm of the Indian Empire. Beyond Nepal are the smaller States of BHUTAN and SIKKIM, whose rulers are Mongolian by extraction and Buddhists by religion. In view of Chinese aggressions in Tibet, the Government of India in 1910 strengthened their relations with Bhutan by increasing their subsidy from fifty thousand to a lakh of rupees a year, and taking a guarantee that Bhutan would be guided by them in its foreign relations. Afterwards China had officially notified that Great Britain would protect the rights and interests of these States.

Assam and Burma.

We then come to the Assam border tribes—the Daflas, the Miris, the Abors and the Mishmis. Excepting the Abors none of these tribes have recently given trouble. The murder of Mr. Williamson and Dr. Gregorson by the Minyong Abors in 1911 made necessary an expedition to the Dihang valley of the Abor country on the N. E. frontier. A force of 2,500 and about 400 military police was employed from October 1911 to April 1912 in subduing the tribe. After two or three small actions the murderers were delivered up. The cost of the expedition was Rs. 21,60,000. At the same time friendly missions were sent to the Mishmi and Miri countries. Close contact with these forest-clad and leech-infested hills has not encouraged any desire to establish more intimate relations with them. The area occupied by the Nagasares runs northwards from Manipur. The Nagasares a Tibeto-Burman people, devoted to the practice of head hunting, which is still vigorously prosecuted by the independent tribes. The Chin Hills is a tract of mountainous country to the south of Manipur. The corner of India from the Assam boundary to the northern boundary of the Shan States is for the most part included in the Myitkyina and Bhamo districts of Burma. Over the greater part of this area, a labyrinth of hills in the north, no direct administrative control is at present exercised. It is peopled by the Shans and the Kachins. Civilisation is said to be progressing and steps have been taken to prevent encroachments from the Chinese side. There is a considerable trade with China through Bhamo. On the Eastern frontier of Burma are the Shan States, with an area of fifty thousand square miles and a population of 1,300,000. These States are still administered by the Sawbwas or hereditary chiefs, subject to the guidance of Superintendents and Assistant Superintendents. The Northern Shan Railway to Lashio, opened in 1903, was meant to be a stage in the construction of a direct railway link with China, but this idea has been put aside, for it is seen that there can never be a trade which would justify the heavy expenditure. The Southern Shan States are being developed by railway connection. The five Karenni States lie on the frontier south of the Shan States. South of Karenni the frontier runs between Siam and the Tenasserim Division of Burma. The relations between the Indian Government and the progressive kingdom of Siam are excellent.

Unrest, which had been brewing for some time among the Kachins, came to a head in December 1914 and January 1915, when punitive operations were undertaken. The columns originally consisted of Burma Military Police, but as the disturbance appeared more general and likely to spread, regular troops were ordered up to Myitkyina. In the Kamaing and Mogaung Jurisdictions, and the adjoining unadministered territory, six columns operated during January and February. The slight opposition encountered was in all cases successfully overcome, the rebel stockades captured, and the implicated villages destroyed.

Railways to India.

The prospect of linking Europe and Asia by a railway running eastwards through Asia Minor has fascinated men's minds for generations. The plans suggested have, owing to the British connection with India, always lain in the direction of lines approaching India. More than 40 years ago a Select Committee of the House of Commons sat for two years to consider the question of a Euphrates Valley railway. The Shah of Persia applied to the British Foreign Office for the investment of British capital in Persian railway construction many years before the end of the nineteenth century. A proposal was put forward in 1895 for a line of 1,000 miles from Cairo and Port Said to Koweit, at the head of the Persian Gulf. While these projects were in the air, German enterprise stepped in and made a small beginning by constructing the Anatolian railway system. Its lines start from Scutari, on the southern shore of the Bosphorus, opposite Constantinople, and serve the extreme western end of Asia Minor. And upon this foundation was based the Turkish concession to Germans to build the Baghdad Railway.

Meanwhile, Russia was pushing her railways from various directions into the Central Asian territory running along the northern frontiers of Persia and Afghanistan to the borders of Chinese Turkestan. The advance of the Russian railheads was regarded with extreme suspicion in England as part of a scheme of adventure against India, and as the Russian lines crept southwards British Indian railways were thrust forward to the Indian north-west frontier. As the two systems approached one another, enthusiasts adumbrated plans for linking them together. M. de Lesseps, the creator of the Suez Canal, made a journey to Bombay to lay one before the Indian Government. He was proposing to start homewards through Afghanistan and Central Asia, so that he might examine a route that way, and *via* Orenburg to Moscow, when the Afghan wars broke out and ended his dream.

The construction of a Trans-Persian railway, connecting India, across Persia, with the Russian lines between the Black Sea and the Caspian Sea came to the forefront after the conclusion of the Anglo-Russian agreement regarding Persia, and simultaneously with this and the advance of the Baghdad railway old projects for British lines running inland into Persia from the Persian Gulf were quickened.

The actual position in regard to these various undertakings up to the outbreak of the European war and, so far as can be ascertained, since then, is as follows :—

Baghdad Railway.

The German group holding the Anatolian railway concession was granted, in 1902, a further concession for extending that system from Konia, then its southern terminus, through the Taurus range to the extreme eastern Mediterranean seaboard, and by way of Nisibin, Mosul and Baghdad to Basra. This concession was substituted for a line projected by a more northerly route through the pass of Diarbekr. Russia strongly objected to that route, on the ground that it would bring the line into the Black Sea basin. When it was abandoned a Russo-Turkish agreement was passed, reserving to Russia the sole right to construct railways in the northern part of Asia Minor, and Russia has since then prepared a number of projects for that region, branching out from Samsun, on the Black Sea. Russia has also prepared her Caucasian railways for possible extensions in the same region, pushing her lines towards Van and making an agreement with Persia, in February, 1913, for a line to Lake Urumia, which was completed in the early part of 1917.

The Anatolian railway company were apparently unable to handle their new concession and initiated fresh negotiations, which resulted in the Baghdad Railway convention of March, 1903. This caused much discussion in England, owing to the apparent intention of the Germans to encroach on the Persian Gulf. Attempts were made by the German group to secure the participation of France and Britain in the undertaking. They were successful in France, the Imperial Ottoman Bank group agreeing to take 30 per cent. of the finance, without, however, the countenance of the French Government. But in England, though Mr. Balfour's Government was favourable, strong objection was taken to the constitution of the Board of Directors, which established German control in perpetuity. It was regarded as a German political move and participation was rejected.

The financial terms, with a Turkish kilometric guarantee, were highly favourable to the company. Thus, the outside cost of construction of the first section, which lies entirely in the plains of Konia, is estimated to have been £625,000, and the company retained a profit of at least 1¼ millions sterling on this part of their enterprise. In the second section the Taurus range was encountered and construction was more difficult and more costly. The railway must for a long time be a heavy burden on Turkish finance. The country through which it passes from the Mediterranean seaboard to the Tigris valley above Baghdad holds out little or no prospect of commercial advantage, and the financial system adopted offers no inducement to the concessionaires to work for increasing earnings. Thus, the Baghdad railway company sublet the working of the line to the Anatolian Railway Company at a rate of £148 per kilometre, as against £180 per kilometre guaranteed by the Turkish Government. The weight of the Turkish obligations in connection with the railway had an important effect upon the discussions, in Paris in the summer of 1913, of the international committee for the examination of questions relating to the Ottoman Debt. The committee was appointed in reference to the financial settlement between Turkey and the Balkan States after the war and it became evident that for some Powers, whatever the deserts of the Balkan Allies might be, the Baghdad railway and Turkey's ability to pay the guarantee upon it were the one fixed point to be guarded in the Ottoman Empire. Important negotiations took place between Germany and France, in 1913, to regulate their respective financial positions in regard to the railway, so as to avoid future conflict of poli-



Considerable railway construction in the Mesopotamian region and neighbourhood, beyond that indicated in the map, has been done by the British Military authorities.

tical interests in the regions of the Baghdad lines and the French railway system in Syria.

The Baghdad Railway was during 1913 advanced southward from Konia 182 miles, to Karapunar, on the northern slope of the Taurus. On the southern side of the mountains, the Mersina-Adana line had been incorporated and 16 miles of track constructed, from Adana to Dorak, among the southern foothills of the Taurus. Work then proceeded to link up Karapunar and Dorak. The distance between them through the mountains is 56 miles. The limestone mountain gorges involved much tunnel work and it was estimated that the work would occupy three years. During the first two years of the war the tunnelling had not been completed, but the gap in the railway was overcome by the construction of a motor road over the pass, with an efficient motor service upon it. It was reported from Sofia in November 1916 that the tunnelling had been completed and opened for traffic.

Eastward from Adana, construction advanced throughout 1913, towards the head of the French Syrian lines at Aleppo, and work was begun on a short branch line connecting this new piece with Alexandretta. The branch was opened to traffic early in 1914. The Germans submitted plans to the Turkish Government in 1913 for the construction of a new port at Alexandretta, in accordance with the terms of a supplementary concession sanctioning the branch line. These included the construction of three docks, a feature of considerable interest. Work was begun early in 1913 on a line running north-west from Aleppo to meet that coming from Adana. It had to pierce the Amanus range of hills by a tunnel three miles long, which, it was estimated, would take three years to construct. Here, as on the Taurus range, the break in the line was at first overcome by building a road and establishing a motor car service upon it, but the railway was completed and in use long before the conclusion of hostilities in Turkey.

So far from the war having stopped work on any section of the railway, it led, for military considerations, to its being pushed forward with increased energy.

Progress was meanwhile made with important stages of the line running north-east from Aleppo en route to Baghdad. This line was in 1913 open to Jerablus, on the Euphrates and the construction of a large bridge at that spot was immediately undertaken, while motor boats and a steamer or two were taken in pieces to Jerablus and launched for river traffic to Baghdad. The journey from Beirut to Baghdad was thus reduced to 8½ days, counting two days from Beirut to Jerablus by train, six days by steamer to Feluja, and finally, 10 hours' carriage drive to Baghdad. The river traffic is likely to be interrupted in the dry season. The Jerablus bridge having been completed, the railway was completed and opened on July 1st, 1914, as far as Tel Abaid, 60 miles east of Jerablus. Earthwork had already been carried much farther. It was reported in the summer of 1915 that 40 miles of line eastward from Tel Abaid had been opened. Trustworthy reports in the autumn of 1916 stated that the line had certainly been completed as far as Nisibin and probably as far as Mosul. Information as to the actual position of the eastern terminus of the line has not yet been published.

Construction was, before the war, being carried on on the Baghdad-Mosul section, material for the latter being taken up-river from Basra to Baghdad by special barges and tugs. The line from Baghdad to Sumike about 40 miles north of Baghdad, was handed over for traffic on June 2nd, 1914, and it was reported in 1915 that another 80 miles on this portion of the railway had been completed taking the rails as far as Samara. This was the railhead when General Maude's victorious army captured Baghdad and progressed to railway limits. Reckoning on the sections completed and open for traffic, a distance of nearly 600 miles had been finished by the summer of 1914 out of a total of 1,020 miles, reckoning from Konia to Baghdad. An official Deutsche Bank report issued in March, 1914, stated that the Balkan wars had caused the German undertaking "to concentrate its Turkish enterprises more than ever upon the Asiatic territories." To this end the Germans handed over their Balkan railway interests to an Austro-Hungarian financial group "on favourable terms," and thus greatly facilitated their special direction of effort in Asia Minor and Mesopotamia. According to Mehrmann's "Diplomatischer Krieg in Vorder Asien", published in 1916, some 50 miles of a railway from Angora to Sivas and Erzerum and Kharput were completed by November of that year and further work has doubtless been carried out in this part of the country.

An agreement was reached in 1914 between Britain and Turkey, with the acquiescence of Germany, regarding the approach to the Persian Gulf. Its central provision was that the railway should not proceed beyond Basra without an agreement with Britain and Britain waived any question of her participation in the Baghdad-Basra section of the line. It was agreed that there should be no differential rates on the railway, and in regard to the latter Britain obtained the right of appointing two directors of the railway, not for purposes of control but to guard British interests. Britain recognised Turkish suzerainty over Koweit and Turkey recognised the independence of the Sheikh of Koweit and the continuance, unimpaired, of the existing relationship between him and the British Government. The Anglo-Turkish Agreement has not yet been published but Sir Edward Grey announced in 1914 that "we get recognition by Turkey of the *status quo* in the Persian Gulf, the *status quo* as we have regarded it for years past." (House of Commons, June 29, 1914). A statement issued in Berlin on June 15, 1914, stated, "The Anglo-German Agreement regarding the Baghdad Railway and Mesopotamia has been initialled in London by Sir Edward Grey and Prince Lichnowsky, the German Ambassador. A complete understanding has been reached on all questions at issue. The agreement will not come into force until after the conclusion of the negotiations with Turkey, as on some material points the assent of the Porte will be necessary. The contents of the Agreement can, therefore, not be divulged at present." The war has altered the whole situation. In

RUSSIAN TURKESTAN
CHINESE TURKESTAN
AFGHANISTAN
KASHMIR
RAJPUTANA
MEKRAN
PERSIAN GULF
CASPIAN SEA
Tashkent
Andijan
Samarkand
Termes
Balkh
Bokhara
R. Oxus
Merv
Kushk
Herat
Kabul
Jelalabad
Peshawar
Lahore
Delhi Junc.
Jaipur
Hyderabad
Jodhpur
Quetta
Chaman
Kandahar
Nushki
Birjand
Seistan
Kerman
Chah Gwadar
Karachi
Yezd
Ispahan
Khoramabad
Dizful
Kermanshah
Hamadan
Kasvin
Teheran
Astara
Tabriz
Aliat
Baku
Basra
Mahomerah
Bushire
Bunder Abbas
From Moscow
Railways working
Lines contracted for
Lines projected

particular the British military authorities have built lines running northward from Basra, the main one running *via* Kurna and serving Baghdad and a branch of it reaching from Kurna to Nasiriyeh, while other lines have been built beyond Baghdad.

Germany also proposed to build a line from Baghdad to Khanikin where a pass through the mountains leads into the West Persian highlands. Russia had agreed to build a railway from Khanikin, *via* Kermanshah and Hamadan to Teheran, construction to begin within two years of the completion of the extension from Baghdad to Khanikin and then to be completed in 4 years.

Trans-Persian Line.

A trans-Persian line to join the Russian Caucasian system with the Indian Railways first assumed proportions of practical importance in the late winter of 1911. Both the Russian and the Indian railways are fully developed up to the points which would be the termini of a trans-Persian line and the following details carry us up to the period of the war. The Russian railway system reaches Julfa on the Russo-Persian border between the Black Sea and the Caspian Sea. A line connecting with this runs from Batum, on the east coast of the Black Sea, to Baku on the west coast of the Caspian. Incidentally, article 59 of the Treaty of Berlin provides that Batum shall be "a free port essentially commercial." The Persian Foreign Minister on February 6, 1913, signed a concession to the Russian Julfa-Tabriz and Enzeli-Teheran Road Companies, giving the right to construct a railway from Julfa to Tabriz (93 miles) with an extension to Lake Urumiah and a preferential right to build a railway from Tabriz to Kazvin. Julfa and Tabriz were at that time equipped with a metalled road, on which a motor omnibus service was maintained. The road was the property of the concessionaire company, so that sections of it could conveniently be utilised for railway construction. The work of constructing the line was thus expedited and the line was opened early in 1915. Eight years is fixed as the time limit for the extension of the line from Tabriz to Kazvin, a further distance of 250 miles. The concession runs for a period of seventy-five years. Option is reserved to the Persian Government to purchase the Julfa-Tabriz line after a lapse of 35 years. The Russian Government Department of Railways in June 1913, approved a concession to a Russian Syndicate for the construction of the line from a point on the railway close to Baku to Astara, a point on the Caspian south-western seaboard, where the Russian and Persian territories meet. More than one possible starting point for the trans-Persian Railway is therefore in course of preparation

On the Indian side, the railway system is fully developed up to Baluchistan, close to the Persian frontier. A broad gauge line running through Quetta to Nushki was constructed with the intention of its development for the benefit of trade which already runs by caravan along the "Nushki trade route" to the Persian province of Seistan. The Russian Government favoured linking up the trans-Persian railway with the Indian railways at this point. But the suspicious saw a strategical reason for this preference. The Indian Government found itself unable to approve the connection. They insist that the line shall run either from Yezd or Kerman to the seaboard. This condition is absolute. There remains, then, a connection with the Indian North-Western Railway at or near Karachi.

The necessary financial arrangements for the preliminary work in connection with the proposal, which came from Russia, to connect the railways with Russia and India were completed in January, 1912. It was then stated that the Russian Committee were already in possession of a nearly complete survey of more than 300 miles from Astara to Teheran and the length of the line from there to Gwadur on the Perso-Baluch Frontier is some 1,200 miles. Soon after this announcement, Mr. Johns was appointed by the Government of India to survey a railway route between Karachi and Gwadur, and found a good line with a general gradient of 1 in 250, the steepest being 1 in 90. Twelve of the principal Russian Banks were interested in the project and the desired amount of English and French capital was guaranteed, one English banking house having even offered to furnish the whole of the English quota. The French concerns are the Banque de Paris et des Pays Bas, the Credit Lyonnais, the Societe Generale, the Comptoir National, the Banque de l'Union Parisienne and Count d' Arnaux.

Meetings of the international financiers concerned in the scheme were held and a Societe d'Etudes was formed. M. G. Raindri, formerly a distinguished member of the French diplomatic service, was selected as President, with Sir William Garstin as British Vice-President and M. Homiakoff, ex-President of the Russian Duma, as Russian Vice-President. The Society consists of a council of administration of 24 persons. The Governments of all three countries gave their approval to the enterprise and on the firm representations of the British Foreign Office a formal memorandum was drawn up providing for absolute equality of British, Russian and French control in the undertaking. It was agreed that in the northern half Russian interest should be 60 per cent French interest 33 1-3 per cent. and British 6 2-3 per cent., and in the southern half Russian interest 6 2-3 per cent., French 33 1-3 per cent., and British 60 per cent. The total interests of the parties in the whole line would thus be equal. The French and Russian proposal was that interests should be equal for the whole line. The above arrangement was made to meet British susceptibilities.

No announcement has yet been made of the settlement of further details in regard to the line. Its general route will presumably be from Astara *via* Teheran to Kerman or Yezd, and thence to either Bunder Abbas, at the entrance of the Persian Gulf, or Chabar, a point on the Mekran Coast, about 100 miles west of Gwadur. As to the cost, £18,700,000 was the amount first declared by Russian experts as sufficient to cover the cost of construction and provision of rolling-stock for the 1,100 miles of railway in Persian territory. English experts then believed that £15,000,000 would be sufficient. Further investigation has led competent experts on the English side to say that the capital involved must eventually total £30,000,000 at least. The line presents no great engineering difficulties, but there would

be a great variety of gradients throughout its length, the line will rise at several points to some thousands of feet above sea-level, and numerous detours will be necessary both for gradients and to serve local needs.

There have been considerable railway developments at British, Russian and Turkish end of Persia during the war.

Central Asian Lines.

There remains the possibility of linking up the Russian and Indian railway systems by way of Afghanistan. But many strategical objections have been raised to the trans-Persian railway and these considerations are strengthened tenfold in regard to bringing the Russian Central Asian lines nearer Kabul. Russia has in recent years considerably increased her railway facilities in Central Asia. The line from Krasnavodsk on the East Caspian shore now extends, *via* Merv and Bokhara and Samarkhand, to Andijan, which is some 350 miles north-west of Kashgar, the important town of Chinese Turkestan. The great network of railways in European Russia is also now directly connected by the Orenburg line with Tashkent, and a connecting line links it up with the southern railway just described. From Merv a line runs south to Kushk, on the Afghan border, within a few miles of Herat. It was reported some time ago that Russia intended building another line extending the Orenburg-Tashkent connection to Termes, a point on the Oxus 50 miles or less from Balkh, which, again, is close to the important strategical point, Mazari-Sharif. It is doubtful whether in a race, Russia, starting from Termes, or Britain, starting from the Khyber, could reach Kabul first. Termes, where, it was stated, Russia proposed to throw a bridge across the Oxus, is the highest point at which that river is navigable from the Aral Sea. The suggestion has often seriously been made in recent years that the Russian line from Merv to Herat should be linked to the Indian line which from Quetta proceeds to the Afghan border at Chaman. The distance between the two railheads is about 520 miles.

Persian Gulf Lines.

Britain's special interests in regard to Persian railways have hitherto primarily been associated with lines running inland from the Persian Gulf, to supersede the old mule routes. Special importance has for many years been attached to schemes for a railway from Mohammerah (at the opening of the Karun Valley, where the Karun River runs into the Shat-el-Arab, just below Basra, near the Turkish border), northwards into the rich highland country of Western Persia. Britain has long established special relations with the Karun Valley and has a large trade there. An agreement was reached between the Persian Government and the representative of a British Syndicate in February, 1913, for the construction of a railway from Mohammerah to Khoramabad, in the interior Persia offered the syndicate a two years' option, during which period the route of the line was to be surveyed. The Persian Government undertook to decide, on the completion of the survey, whether it would build the railway as a State line under contract with the Syndicate, or whether it would grant the Syndicate a concession for the construction of the line. The Syndicate immediately began preliminary operations. Four English engineers were sent out, and exactly two months after the agreement was announced they proceeded to Dizful, on the route of the line, for the purpose of making preliminary surveys. The Syndicate was composed of six groups, of which four are already connected with Persian commerce, *viz.*, the Anglo-Persian Oil Company, the Imperial Bank, the Euphrates and Tigris Steam Navigation Company (Messrs. Lynch), and the British India Steam Navigation Company. The Syndicate was prepared to undertake much more extensive railway construction in Southern Persia. As Russia was eventually to build a line from Teheran to Khanikin, the Khoramabad line would, it was supposed, probably be linked with this line, at Hamadan or elsewhere, so that Persia would have two routes from the Gulf to the north. The latest reports stated that the survey work on the Mohammerah-Khoramabad line was "hung up" owing to the disturbed state of the Luristan tribes around Dizful. The Persian Government agreed to a slight modification of the terms of the concession to meet the situation thus created and Sir E. Grey stated in the House of Commons that "every effort will be made to proceed with survey as soon as the situation in Luristan appears to the responsible authorities to justify such a step.... It is contemplated that the Swedish gendarmerie which has done very good work recently in other parts will devote their attention to Luristan with the object of pacifying that part of the country as they have done in some other parts." As a result of repeated Anglo-Russian applications the Swedish Government permitted General Hjalmarsson, the head of the Persian gendarmery, to return to Persia in November, 1914. The war resulted in great unrest and in treachery on the part of the Swedish gendarmerie officers, as a result of German instigation, in Western Persia. The Persian Government dispensed with the services of the Swedes and the gendarmerie have been reorganised by British officers. Nothing further has been reported about progress with the Karun Valley line.

Period of Transit.

It is commonly said that the Trans-Persian railway would bring India within eight days of London. The possibility was demonstrated by the performance of a party who travelled from London to Persia in 1914 and sent the following details of their journey to the *Times*. The party left London by the 8-35 p.m. train on a Saturday and arrived at Baku at 10-20 p.m. (London time, say, 7-30 p.m.) on the following Thursday, and at Enzeli, on the south-west shore of the Caspian, (reached by steamer from Baku), at 6 a.m. on the following Saturday.—that is, within six and a half days from London. They travelled *via* Folkestone, Flushing, Berlin, Warsaw, Snamenka, Rostoff and Beslan, and were detained at Warsaw some ten hours and at other points a full 12 hours more, thus reducing the actual travelling to 5½ days, which was a "record." There remained, at the end of their journey, only the trans-Persian stage, which it is hoped to cover by the new line, so that an express service from London to Delhi ought to be easily possible within the eight days.

Foreign Consular Officers in India.

Name.	Appointment.	Port.
Argentine Republic.		
Mr. C. W. Rhodes	Vice-Consul	Calcutta.
Austria-Hungary.		
The Consul-General for Netherlands, Simla, is in charge of Austro-Hungarian interests during the War.		
Belgium.		
Mr. Robert Chaidron	Consul	Bombay.
Mr. J. Simon	Do.	Calcutta.
Mr. James Rorie Baxter (Ag.)	Do.	Karachi.
Mr. E. S. Murray	Do.	Aden.
Mr. G. K. Walker	Do.	Madras.
Mr. W. Macdonald	Do.	Rangoon.
Mr. R. A. Scott	Do.	Akyab.
Mr. J. Lince	Vice-Consul	Calcutta.
Mr R. W. Watson (In charge)	Do.	Bombay.
Bolivia.		
Kumar Shyama Kumar Tagore	Consul-General	Calcutta.
Brazil.		
Mr. Joakim D. S. Nahapiet	Consul	Calcutta.
Dr. Edward F. Underwood, M.A., M.D., Ph.D., J.P.	Do.	Bombay.
D. Robertson	Consular Agent	Rangoon.
Chili.		
Senor Don Arturo Cabrera	Consul-General	Calcutta.
Vacant	Vice-Consul	Bombay.
Vacant	Do.	Madras.
Senhor L. Grommers	Do.	Calcutta.
Vacant	Do.	Chittagong.
Mr. William Archbald	Do.	Rangoon.
China.		
Chia Wan Yan	Consul	Rangoon.
Costa Rica.		
Kumar Shyama Kumar Tagore	Consul	Calcutta.
Cuba.		
Mr. John Zuberbuhler (Acting) on leave ..	Honorary Consul	Bombay.
Dr. Blasio Paes (In charge)	Do.	Do.
J. Orlando Ferrer	Do.	Calcutta.
Denmark.		
Mr. S. G. L. Eustace	Consul-General	Calcutta.
Mr. A. F. Sells	Consul	Bombay
Mr. E. S. Murray	Do.	Aden.
Mr. R. T. Menzies	Do.	Madras.
Mr J. F. Jensen	Do.	Rangoon.
Vacant	Vice-Consul	Karachi.
Mr. S. G. L. Eustace	Do.	Calcutta.
Mr. P. T. Christensen	Do.	Moulmein.

Name.	Appointment.	Port.
Ecuador.		
Kumar Shyama Kumar Tagore	Consul	Calcutta.
France.		
Hyacinthe Le-Feuvre-Meanlle	Consul-General	Calcutta.
Mr. E. Nicault	Chancellor	Do.
M. Harold Martin	Acting Consul	Bombay.
M. M. Ries (on leave)	Consular Agent	Aden.
M. Adolphe Ries (Acting)	Do.	Do.
Mr. E. L. Price	Do.	Karachi.
Mr. F. E. L. Worke	Do.	Madras.
Vacant	Do.	Chittagong.
J. Scott	Do.	Rangoon.
Vacant	Do.	Akyab.
Do.	Do.	Coconada.
Do.	Do.	Tellicherry.
Do.	Do.	Do.
Germany.		
The Swiss Consular officers are in charge of German interests during the War.		
Greece.		
Mr. E. S. Petrocochino	Consul	Calcutta.
Guatemala.		
Mr. H. J. Sanders	Consul	Calcutta.
Italy.		
Count G. Violadi Campalto	Consul-General	Calcutta.
Cav. G. Cecchi	Consul	Aden.
Cav. Dr. G. Gorio (on leave)	Do.	Bombay.
Signor Alfredo Manzato (Acting)	Do.	Do.
Mr. J. Mickle	Do.	Rangoon.
Vacant	Vice-Consul	Calcutta.
Signor Alfredo Manzato (in charge of consulate)	Do.	Bombay.
Vacant	Consular Agent	Madras.
Vacant	Do.	Moulmein.
Vacant	Do.	Akyab.
Mr. H. J. Guy, R.N.R.	Do.	Bassein.
Signor Aldo Viola	Do.	Karachi.
Japan.		
Mr. N. Sakenobe	Consul-General	Calcutta.
Mr. Kazue Kuwashima	Consul	Bombay.
Mr. Kenzo Ito, Chancellor	....	....
Liberia.		
Dr. Benode Behari Banerjee	Consul	Calcutta.
Dr. C. H. Freeman Underwood, M.D.	Do.	Bombay.
Mexico.		
Mr. R. L. B. Gall	Consul	Calcutta.

Name.	Appointment.	Port.
Netherlands.		
Mons. J. Barendrecht	Consul-General	Calcutta
Mons. L Grommers	Consul	Do.
Mons. J. G. Bendien (on leave)	Do.	Bombay.
C. Krook-Wzn (Acting)	Do.	Do.
Mr. D. van Wijngaarden	Do.	Karachi.
Mr. W. Meek	Do.	Aden.
Mr. R. A. Scott	Do.	Akyab.
Monsieur W. Massink	Do.	Rangoon.
Mr. J. W. Crusha	Do.	Madras.
Mr. A. J. Steiger	Do.	Colombo.
Norway.		
Mr. Einar Rolfsan	Consul-General	Calcutta.
Mr. F. E. Hardcastle	Consul	Bombay.
Mr. W. Meek	Do.	Aden.
Sir H. S. Fraser, Kt.	Do.	Madras.
Mr. H. A. Rees	Do.	Rangoon.
Mr. G. J. Smidt	Vice-Consul	Calcutta.
Mr. S. G. Ritherdon	Do.	Chittagong.
Mr. S. Lucas	Do.	Do.
Mr. A. Gardiner	Do.	Coconada.
Mr. D. Miller	Do.	Tuticorin,
Mr. E. G. Moylan	Do.	Akyab.
Mr. J. Anderson	Do.	Bassein.
Mr. J. McCracken	Do.	Do.
Mr. J. J. Shaw	Do.	Moulmein.
Mr. Vivian Fox (on leave)	Do.	Karachi.
Mr. I. R. Baxter (Acting)	Do.	Do.
Persia.		
Mirza Sir Davood Khan Meftahos-Saltaneh, K.C.M.G.	Consul-General	Calcutta.
Mirza Ali Akbar Khan, B.A., Barrister-at-Law.	Consul	Bombay.
Khan Bahadur Haji Mirza Shujaut Ali Beg	Do.	Calcutta.
AgaMirza Abdul Husain Ispahani	Do.	Madras.
Kumar Shyama Kumar Tagore	Vice-Consul-General	Calcutta.
Mir Ayub Khan	Vice-Consul	Karachi.
A. A. Ali Akbar Sheerazee	Do.	Rangoon.
Vacant	Do.	Moulmein.
Peru.		
Mr. Gilbert B. Hall	Consul	Rangoon.
Mr. W. A. Ironside	Do.	Calcutta.
Portugal.		
Senhor Benito d'Alpoim Toresano Moreno	Consul-General	Bombay.
Dr. E. M. D'Souza	Consul	Rangoon.
Mons. C. Jambon	Do.	Calcutta.
Mr. Shairp	Do.	Colombo.
Mr. Hormusji Cowasji Dinshaw	Do.	Aden.
Dr. F. daCunha Pinto	Vice-Consul	Bombay.
Dr. A. B. daFonseca (on leave)	Do.	Karachi.
Dr. L. Castallino (Acting)	Do.	Do.
Dr. A. M. D'Souza	Do.	Rangoon.
James Short	Do.	Madras.

Name.	Appointment.	Port.
Russia.		
W. W. Tomanosky	Consul-General	Calcutta.
Mons. M. Ries (on leave)	Vice-Consul	Aden.
Mr. Adelphe Ries (Acting)	Do.	Do.
R. A. Lissovsky	Do.	Calcutta.
A. F. Mytchko	Do.	Do.
Siam.		
Luang Bhasha Parivatra	Consul-General	Calcutta.
Mr. H. P. W. Macnaghten	Consul	Bombay.
Mr. E. J. Holberton	Do.	Rangoon.
Mr. A. H. Russell	Do.	Moulmein.
Mr. C. Van-der-Gucht	Do.	Do.
Spain.		
Senhor B d'Alpoim	Consul	Bombay.
Mons. L. Grezoux	Vice-Consul	Calcutta.
Mons. M. Ries (on leave)	Do.	Aden.
Mr. Adelphe Ries (Acting)	Do.	Do.
Mr. William Archbald	Do.	Rangoon.
Sweden.		
Mr. T. H. Wheeler	Consul-General (Acting)	Calcutta.
Mr. E. R. Logan	Consul	Madras.
Mr. L. Volkart	Do.	Bombay.
Mr. A. E. Adams	Do.	Aden.
Mr. W. A. Scholas	Do.	Rangoon.
Mr. T. H. Wheeler	Vice-Consul	Calcutta.
Vacant	Do.	Moulmein.
Switzerland.		
Mr. Charles Ringger	Consul	Bombay.
Turkey.		
The Consular officers for Sweden are in charge of Turkish interests during the war.		
United States of America.		
James A. Smith	Consul-General	Calcutta.
J. P. Doughten	Vice-Consul	Do.
Lawrence P. Brigge	Consul	Rangoon.
H. B. Osborn	Vice-Consul	Do.
Lucien Memminger	Consul	Madras.
Frank C. Rich	Vice-Consul	Do.
Walter A. Leonard	Consul	Colombo.
John A. Nye	Vice-Consul	Do.
Stuart K. Lupton	Consul	Bombay.
Lawton Miller	Vice-Consul	Do.
James Oliver Laing (on leave)	Consul	Karachi.
E. L. Rogers	Acting Consul	Do.
Addison E. Southord	Consul (on leave)	Aden.
Arthur G. Watson	Acting Consul	Do.
H. W. Timewell	Consular Agent	Busrah, Persian Gulf.
.....	Do.	Chittagong.
Uruguay.		
Mons. C. Jambon	Consul	Calcutta.

The Army.

The great sepoy army of India originated in the small establishments of guards, known as peons, enrolled for the protection of the factories of the East India Company; but sepoys were first enlisted and disciplined by the French, who appeared in India in 1665. Before this, detachments of soldiers were sent from England to Bombay, and as early as 1625 the first fortified position was occupied by the East India Company at Armagon, near Masulipatam. Madras was acquired in 1640, but in 1654 the garrison of Fort St. George consisted of only ten men. In 1661 Bombay was occupied by 400 soldiers, four years before the French appeared in India. In 1668 the garrison of Bombay consisted of 285 men, of whom only 93 were English, the remainder being French, Portuguese and natives.

While the origin of the regular sepoy army is usually dated from 1748, when Stringer Lawrence, "the father of the Indian Army," enrolled an Indian force in Madras, it is interesting to note that there was a considerable military establishment in Bombay prior to that date. In 1741 this establishment, which was considered as one regiment, consisted of a captain, nine lieutenants, fifteen ensigns, a surgeon, two sergeant-majors, 82 sergeants, 82 corporals, 26 drummers, and 319 European privates, together with 31 "masters" (probably Eurasians) and 900 topasses—presumably Goanese. These were distributed in seven companies, their total monthly pay being 10,314 rupees. There was in addition a kind of native militia, composed of 700 sepoys including native officers. These were maintained at a monthly cost of 312 rupees. They were not equipped or dressed in a uniform manner, but supplied their own weapons—swords and shields, bows and arrows, pikes, lances or matchlocks. After the declaration of war with France in 1744, the forces at Bombay were considerably increased, and an artillery company was raised. Already in 1740 the French at Pondicherry had raised a large force of Musalman soldiers, armed and equipped in the European fashion; and the fall of Madras, which the French captured in 1746, induced the English East India Company to begin the formation of a military establishment of like nature. In January 1748 Major Stringer Lawrence landed at Fort St. David to command the forces of the Company. The English foothold in India was then precarious. The French under Dupleix were contemplating further attacks; and it became necessary for the English Company to form a larger military establishment. The new commandant at once set about the organisation and discipline of his small force. The garrison was organised in seven companies; and the peons, or factory guards, were also formed into companies. This was the beginning of the regular Indian Army, of which Lawrence eventually became Commander-in-Chief. In Madras the European companies developed into the 1st Madras Fusiliers; similar companies in Bombay and Bengal became the 1st Bombay and 1st Bengal Fusiliers. The native infantry was similarly developed and organised by Lawrence and Clive, who was his contemporary, and military adventurers—both Musalman and Hindu—readily took service under the East India Company. By degrees Royal Regiments were sent to India, the first being the 39th Foot which arrived in 1754.

Struggle with the French.

From this time for a century or more the Army of India was engaged in constant war. After a prolonged struggle with the French, whom Dupleix had by 1750 raised to the position of the leading power in India; the efforts of Stringer Lawrence, Clive and Eyre Coote completed the downfall of their rivals, and the power of England was established by the battle of Plassey in Bengal and on the field of Wandewash in Southern India. In 1761 the final overthrow of the French was completed, and the territories of that enterprising people were reduced to a few settlements on the coast, the principal of which, Pondicherry, was captured in 1793. But while the Army of India had accomplished this much, they had now to contend with the great native powers, both Hindu and Mahomedan. A number of independent states had arisen on the decline of the Mughal Empire; some ruled by the satraps of the Emperor of Delhi and others by the Mahratta princes who had succeeded to and extended the conquests of Sivaji; while in Mysore Hyder Ali, a Mussalman adventurer, had established himself in the place of the Hindu Raja. A great and prolonged struggle took place with the ruler of Mysore, in which the forces of the Crown and the Company's Army bore a distinguished part. This struggle extended over nearly twenty years, and terminated only with the death of Hyder's son and successor Tipu when his capital of Seringapatam was taken by assault in 1799.

Presidency Armies.

The extension of British territory had necessitated a corresponding augmentation in the strength of the armies of Bengal, Madras and Bombay, which were entirely separate organisations, as rendered requisite by the great distances and independent territories by which they were separated. But Bengal and Bombay troops had taken part in the wars in Southern India, although the brunt of the fighting had fallen on the Madras Army. These armies had grown both in strength and efficiency. In 1787 the Governor-General, Lord Cornwallis, wrote to the Duke of York—"A brigade of our sepoys would make anybody emperor of Hindustan. The appearance of the native troops gave me the greatest satisfaction; some of the battalions were perfectly well-trained, and there was a spirit of emulation among the officers; and an attention in the men, which leaves me but little room to doubt that they will soon be brought to a great pitch of discipline."

Reorganisation of 1796.

In 1796, when the native armies were reorganised, the European troops were about 13,000 strong; the native troops numbered some 57,000, the infantry being generally formed into regiments of two battalions each. In Bengal native infantry regiments were formed by linking existing battalions. The establishment of each two-battalion regiment was 1 colonel commandant, 2 lieutenant-colonels, 2 majors, 8 captains,

22 lieutenants, 10 ensigns, 2 European non-commissioned officers, 40 native officers, 200 native non-commissioned officers, 40 drummers and fifers, 1,600 sepoys. Each battalion had two grenadier and eight battalion companies. Promotion and furlough rules for the officers were promulgated and interior economy was improved. At the same time the Madras and Bombay armies were reorganised. The Madras cavalry was formed into four regiments, having twelve British officers each, the artillery into two battalions of five companies each and fifteen companies of lascars. The native infantry was organised in eleven two-battalion regiments, rather stronger than those of the Bengal establishment. There were also two battalions of European infantry. The Bombay Army was organised on similar lines, with an establishment of six two-battalion regiments and a Marine Battalion; six companies of European artillery were formed in 1798.

Policy of Wellesley.

Besides the wars that have been referred to, the East India Company had been engaged in minor operations, particularly against the growing power of the Mahrattas, which menaced the stability of the British in India. In 1798 the Marquis Wellesley arrived as Governor-General firmly imbued with the necessity of reducing the power and influence of the French, which had again arisen through the military adventurers who had established themselves in the service of various native powers. There was a French party at Seringapatam, and the ruler of Mysore was in correspondence with Napoleon Bonaparte in Egypt. At Hyderabad the French adventurer Raymond dominated the State army, having under his command a disciplined force of 14,000 men who carried the colours of the French Republic and wore the Cap of Liberty engraved upon their buttons. In the Mahratta States, and especially in Sindia's service, adventurers of the same enterprising nation had disciplined large forces of infantry and artillery; and the blind Mughal Emperor at Delhi was held in the power of Perron, Sindia's French General. One of the first acts of the new Governor-General was to disarm the French party at Hyderabad, a measure carried out by Captain (afterwards Sir John) Malcolm. The French officers in the Nizam's service were deported to their own country, and a treaty of alliance was concluded under the terms of which a Contingent of Hyderabad Troops was supplied for service in the campaign of Seringapatam. Troops of all three presidencies took part in the campaign which terminated with the capture of Seringapatam and the death of Tipu on the 4th May 1799. It was in this campaign that Colonel Arthur Wellesley, afterwards Duke of Wellington, came into prominent notice. It was now necessary to direct attention to affairs in the Mahratta States, which were encroaching on the territories of our ally the Nizam, and had a dangerous ascendancy throughout India. An opportunity occurred in supporting the Peshwa, who had been expelled from Poona by Holkar.

The Mahrattas.

The Mahrattas, originally mere predatory hordes, had become an organised nation under the rule of Sivaji. After his death the Government which he had inaugurated passed from the feeble hands of his successors, the Rajas of Satara, into those of the astute Brahmin Ministers, the Peshwas; who had their seat at Poona. Other Mahratta princes, descended from officers of State—Sindia, Holkar, the Gaikwar and the Raja of Berar—held sway over a great part of India; and were attempting to extend their dominions and consolidate their influence from the Ganges to the Godavery. The Mahrattas, famous as irregular predatory hordes in times gone by, had never been remarkable for courage, the place of which was supplied by their natural astuteness and capacity for organisation. The genius of the nation lay more in the direction of diplomacy and intrigue, and a false glamour appears to surround their name as warriors, to which history has lent an undeserved prestige. Their success must in part be prescribed to their intellectual acumen and subtlety, and in part to the effete condition of those with whom they had to contend. The edifice of their nationality was built on the ashes of the declining Mughal Empire. But even since the days when their military renown had rested on some solid foundation they had rapidly declined, and the phantom of their fame was dissipated the moment they came into collision with European armies. Their artillery and infantry, composed of Jats, Rajputs, Arabs and other mercenaries, fought with desperate valour, but the far-famed Mahratta horse disappeared from the field at the beginning of every action. General Lake in the north of India defeated the forces of Sindia in a succession of battles at Aligarh, at Agra, at Delhi and Laswari; while in the south General Arthur Wellesley captured Ahmednagar and Gawilgarh, and gained complete victories over the combined forces of Sindia and the Raja of Berar at Assaye and Argaum. In these campaigns a considerable British force and a large portion of the Bengal and Madras armies were employed; they acquitted themselves with their customary valour, and gained some of the most notable victories recorded in English history. During the progress of these wars the Army of India was considerably augmented; and we find that on reduction to peace establishment in 1805 there were some 25,000 British and 130,000 native troops in India.

Mutiny at Vellore.

The Indian Army has been from time to time subject to incidents of mutiny which were precursors of the great cataclysm of 1857. In the fort of Vellore in 1806 were confined the sons of Tipu Sultan, these descendants of the most fanatical enemy of the English in India being permitted to maintain a large body of adherents and an almost regal state. Naturally they intrigued. The native soldiers of the Company had grievances. The military authorities had issued a new pattern of turban, which owing to its resemblance to the head-dress worn by half-caste drummers, gave rise to a rumour that their conversion to Christianity was intended. Other inconsiderate orders, prejudicial to the religion and sentiments of both Hindus and Mahomedans, caused the smouldering discontent already existing to break out into open

mutiny. There were many signs and portents typical also of the greater rebellion. The officers had become estranged from their men and lived too much apart from them. The native troops suddenly broke out and killed the majority of the European officers and soldiers, their wives and children, quartered in the fort, while the striped flag of the Sultan of Mysore was raised on the ramparts. But if the parallel so far is close, the method of dealing with the outbreak of 1806 differed widely from the weakness displayed at Meerut in 1857. There was happily at the neighbouring station of Arcot a soldier of energy, decision, and courage both moral and physical. Colonel Gillespie with the 19th Light Dragoons and galloper guns came down upon the mutineers like a hurricane, blew in the gates of the fort, destroyed most of the sepoys, and in the course of a few hours suppressed the rebellion. This retribution struck terror into the hearts of other would-be mutineers and disaffection, which was rife throughout the Madras Army, did not elsewhere find active expression.

Overseas Expedition.

Almost as dangerous was the mutinous discontent excited among the British officers by the ill-advised measures of Sir George Barlow, unfortunately acting temporarily as Governor-General in 1809, which was with difficulty quelled by the tact of wiser and more considerate men. It was not only within the confines of India that the Army distinguished itself during the period under review. Expeditions were made beyond seas. Bourbon was taken from the French; Ceylon, Malacca, and the Spice Islands were wrested from the Dutch; and Java was conquered in 1811 by a force largely composed of Bengal troops which had volunteered for this service. In 1814 took place the Nepal War, in which the brave Gillespie who had so distinguished himself at Vellore and in Java, was killed when leading the assault on a fort near Dehra Dun. This war is chiefly of interest from its having introduced us to the Gurkhas, inhabitants of Nepal, who form so large and efficient a portion of our Indian Army.

Second Mahratta War.

In 1817 hostilities again broke out with the Mahrattas. The primary cause of the war were the Pindaris, a military system of bandits of all native races and creeds who, formed mostly from the military adventurers who had been employed by native potentates, had established themselves in strongholds on the banks of the Narbada river, from whence they issued to plunder the country from the end to end. These people had become so formidable that a large army had to be assembled for their destruction, for they viewed with dismay and opposed with force the establishment of effective power in the land where they had so long carried on with impunity their lawless modes of life. To cope with this growing evil, armies were to close in from every direction on the fastnesses of the Pindaris. At the same time a watch had to be kept on the Mahratta States, whose rulers, encouraged by the feeble policy that had followed when the strong hand of the Marquis Wellesley was removed, were prepared to take up arms once more. Practically the whole of the Army took the field, and all India was turned into a vast camp. The experiences of 1817 differed in no wise from those of 1803, except that resistance was less stubborn as the brigades of the European military adventurers no longer existed in the Mahratta armies. The Chiefs of Poona, Nagpore, Indore and Gwalior rose in succession. At the battle of Kirkee, where the tramp of the myriad Mahratta horse shook the very earth, they were beaten off by one-tenth of their numbers after a feeble attempt to charge a native regiment. At Koregaum where the detachment under Captain Staunton offered so gallant a resistance to the attacks of a vastly superior force, the Arabs alone fought on the side of the Mahrattas, 20,000 of whom stood idle on the plain. At Sitabaldi a few regiments of Madras native infantry beat off the attacks of the army of the Raja of Nagpore, and victory was assured by the charge of a troop of Bengal cavalry. At the battle of Mahidpur the hosts of Holkar melted like snow from the face of the desert before the determined onslaught of a small army of British and native troops. This was the last war in Southern India. The tide of war rolled to the north, never to return. In the Punjab, to the borders of which our frontier was now extended, the Army was to meet in the great military community of the Sikhs, a braver and more virile foe.

Reorganisation in 1824.

In 1824 there was another outbreak of mutiny, this time at Barrackpore in a regiment that was unwisely dealt with when about to proceed to the Burmese War. In that year the armies were reorganised, the double-battalion regiments being separated, and the battalions numbered according to the dates when they were raised. The Bengal Army was organised in three brigades of horse artillery, five battalions of foot artillery, two regiments of European and 68 of native infantry, 5 regiments of irregular and 8 of regular cavalry. The Madras and Bombay armies were constituted on similar lines, though of lesser strength. There were also various local forces, such as the Hyderabad Contingent, paid for by the Nizam, consisting of horse, foot and artillery. The irregular cavalry were all silladars, that is the troopers furnished their own horse and equipment, as do the greater part of the native cavalry of to-day. The irregular and local corps had each only two or three European Officers.

First Afghan War.

In 1839 the occupation of Afghanistan was undertaken, Kabul was occupied, and a large Army stationed in this country beyond the Indus. There followed the disasters of Kabul, the murder of British envoys, and the retreat in which a whole army perished. This disaster was in some measure retrieved by subsequent operations, but it had far-reaching effects on the *morale* of the Army and on British prestige.

The Sikhs.

The people of the Punjab had witnessed from afar the disaster of the retreat from Kabul. It is true that they had seen also the advance of the victorious army, and the triumph of its return which was celebrated

with barbaric pageantry at Peshawar; but the British army had lost the prestige of invincibility which it had gained during a hundred years of victory throughout peninsular India. It is convenient here to give some account of the Sikhs in whom our army met a more formidable enemy than they had hitherto encountered, who have since supplied many of the best soldiers in its ranks, and who less than nine years later served with valour and fidelity beneath our colours in the great struggle of the sepoy war. In the early part of the sixteenth century Baba Nanak, a peasant of a village near Lahore, founded the religious sect which was to play such an important part in the history of India. The religion he preached was pure monotheism and in no way militant in its original form. The new faith, founded on the Unity of God and the religious equality of man, gradually made great headway, the philanthropy and tolerance of its tenets appealing to the hearts of men. The Gurus who succeeded Nanak were active in their teaching; they founded and built the Golden Temple at Amritsar; and the sect began to assume a political significance. This brought them into conflict with the Mughal Government, and Sikhism was subjected to that persecution which was alone necessary to transform it into a militant political force. Har Govind, the Sixth Guru, became a military as well as a spiritual leader, and on his death in 1645 left the Sikhs a strong and militant power.

After two hundred years the Sikh faith became established as a guiding principle to work its way in the world. Nanak disengaged his little society of worshippers from Hindu idolatory and Mahomedan faith; Amar Das preserved the community from declining into a sect of ascetics; Arjan gave his increasing followers a written rule of conduct and a civil organisation; Har Govind added the use of arms and a military system: Govind Singh bestowed upon them a distinct political existence, and inspired them with the desire of being socially free and naturally independent. Sikhism arose where fallen and corrupt Brahminical doctrines were most strongly acted on by the vital and spreading Mahomedan belief. As in the case of other sects whose vicissitudes are recorded in the history of the world, religious persecution gave to Sikhism that vivifying influence which was the necessary stimulus to permanence and progress. With varying fortunes the power of the Sikhs was consolidated, and by 1785 they were predominant from the frontiers of Oudh to the Indus. Their prestige is illustrated in the story of the traveller Foster, who describes the alarm caused to a petty Chief and his people by the appearance of two Sikh horsemen under the walls of their fort. The great Chief Ranjit Singh, the "lion of the Punjab," established his ascendancy throughout that province, and with the aid of European military adventurers such as Ventura and Allard organised a powerful regular army. Ranjit Singh had the wisdom to keep on friendly terms with the English, but his death was the signal for internal dissensions which in course of time rendered the Army the principal power in the state, and brought them into conflict with their English neighbours.

Sikh Wars.

A large portion of the Bengal Army under Sir Hugh Gough took part in the first Sikh War in 1845-6, in the opening battle of which, at Mudki and Ferozeshahr, the native troops did not greatly distinguish themselves; although they retrieved their reputation in subsequent actions when the Sikhs were defeated at Aliwal and Sobraon. But the Bengal Army had for some time been undergoing that deterioration of discipline which culminated a dozen years later in the mutiny. They were no longer the soldiers of Lake and Hastings; the heroes of Laswari, of Seringapatam, and of expeditions overseas. In the snows and deserts of Afghanistan and amid the bloody scenes of the Khurd Kabul Pass and Jagdalak they had lost much of their ardour and prestige, while they had witnessed the defeat and slaughter of their hitherto invincible English comrades. They fought well on occasion, stimulated by the presence and example of English regiments; but their training and discipline left much to be desired. The second Sikh War followed a few years later, when, after the indecisive battle of Chillianwala, the Sikhs were finally vanquished at Gujarat. The other campaigns belonging to this period were the conquest of Sind by Sir Charles Napier and the Second Burmese War. On the eve of the Mutiny there were in the Bengal Army 21,000 British and 137,000 native troops; in the Madras Army 8,000 British and 49,000 native troops; and in Bombay 9,000 British and 45,000 native troops. The conquest of the Punjab extended our frontier to the country inhabited by those turbulent tribes which have given so much trouble by their raids and forays, while they have supplied many soldiers to our army. To keep order on this north-western limit of the Empire the Punjab Frontier Force was established, and was constantly engaged in small expeditions which, while they generally involved but little bloodshed, kept the Force fully employed for many years, and involved much ardous work in the pursuit of an elusive enemy.

The Indian Mutiny.

The history of the Indian Army in general and of the Bengal Army in particular is so closely bound up with the great Mutiny of 1857 that it is necessary to enter into some account of the causes which brought about that catastrophe, and to sketch in outline its chief events. In 1856 Lord Dalhousie resigned the Viceroyalty of India after a term of office marked by strenuous activity and by an extensive policy of annexation. From Oudh a dissolute and incompetent king was removed and his territories were annexed to the British dominions, an act which could not but have a disturbing effect in a country where the natural and hereditary rulers of the people were regarded with the greatest veneration. The territory of Jhansi was also annexed, the Government refusing to allow the Rani to adopt an heir to succeed her deceased husband; and the Nana of Bithur, adopted son of the last Peshwa Baji Rao, was refused a continuance of his adoptive father's pension. These two latter, the Rani of Jhansi and Nana Sahib, became the bitterest and most cruel of our enemies. The

annexation of Oudh was a severe shock to the susceptibilities of the feudal nobles of that province, from which it must be remembered a large portion of the Bengal Army was recruited. There were thus political causes of disaffection in India apart from the constant presence of racial difference, fostered by political agitators and a seditious press. There were Princes and States ripe for rebellion: while on the throne of the Mughals at Delhi there sat the shadow of a monarch whom tradition and the greatness of a name caused to be venerated by Mussalmans throughout India. And in the Bengal Army political agitators found a fertile soil for planting the seed of corruption.

The infantry of that army had in its ranks a great majority of Oudh sepoys; while men of the same race formed the bulk of forces such as the Gwalior Contingent, maintained by Native States under the terms of treaties with the British Government. A small percentage of Mahomedans of Hindustan was also to be found in the Bengal Native Infantry, while they supplied the greater part of the Cavalry of that Presidency. It will thus be understood that in both armies there was a dangerous preponderance of one class, facilitating and extending combination on the part of the disaffected. It was different with the armies of the other Presidencies, which were entirely separate from the Bengal Army, and under their own Commanders-in-Chief, and where men of every caste and creed were mingled in the ranks, a system which obviated the likelihood of combination among men ever prone to be suspicious of one another. There were in the Madras Army family ties to keep the men true to their salt. In that Presidency the sepoy had in almost every instance a large number of relatives living with him. He was not likely to abandon these relations to their fate, and mutiny against the Government he served. The Presidential system, in fact, offered an effective safe-guard in the "watertight compartments" that prevented those armies from intermingling. There was not only no sympathy but some antagonism between the different armies; and on one occasion when regiments of the northern and southern Presidencies were serving together, an order had to be issued that the Madras sepoys were not to irritate their brethren by calling them "Bengalis" which was regarded as an opprobrious term, applicable properly to a despised and unwarlike race which has never furnished any soldiers. While the susceptibilities of the Oudh sepoy had been hurt by the annexation of his country, the Muhammadans still held in veneration the puppet who occupied the throne of the great Mughals and cherished the recollection of former glory and power. They had in addition the influence of a fanatical religion to incite them to a holy war against the Christians. Their combination with the Hindus is, however, somewhat remarkable, and the causes which brought these antagonistic peoples into alliance must be sought for elsewhere than in political influences. That there were leaders such as the Nana, the Rani of Jhansi and the Maulvi of Fyzabad who made use of the native army for purposes of rebellion has already been indicated. But the army would not mutiny merely at the instigation of a few political intriguers and agitators. The seeds of disaffection had long been growing in the Bengal Army. The disasters of the Afghan War had taught the sepoy that his European comrade was not invincible. The proportion of Native to British soldiers in India was far too great. The Indian Empire in those days rested too largely on mercenary forces. There were in the country only some 38,000 British soldiers, while the native troops numbered 200,000 men, exclusive of the numerous levies of independent or semi-independent princes. A great establishment of native artillery had grown up. While the Bengal sepoy had deteriorated in *morale*, he had cause for discontent. He had been alternatively pampered and abused. The grant of extra allowances on all occasions for field service had in the first place excited his cupidity; their withdrawal had aroused his discontent. He feared that attempts were being made to destroy his caste and subvert his religion, the points on which he was most sensitive. There was too much centralisation of power in the hands of the military authorities at Army Headquarters. The proselytising spirit was abroad, and some amiable but fanatical officers preached their religion about the country. The crucial question of the greased cartridges brought matters to a head. With a great deal of reason the sepoys complained of the new cartridge, the paper of which was greased with animal fat, said to be that of swine and oxen, the former abhorrent to Musalmans, the latter sacrilegious to Hindus. The mysterious unleavened cakes were circulated, and while their significance was realised by some, it was ignored by those in authority.

Course of the Rising.

The introduction of the new cartridge for the Enfield Rifle in January 1857 caused widespread alarm among the native ranks of the army. At Berhampore the 19th Bengal Infantry mutinied, and was marched to Barrackpore and there disbanded on the 31st March. On the 29th March, sepoy Mangal Pande, of the 34th Bengal Infantry at Barrackpore, attacked and wounded the Adjutant and European sergeant-major of his regiment. At Meerut on the 24th April eighty-five men of the 3rd Bengal Cavalry refused to take the new cartridge. They were tried and sentenced to ten years' imprisonment, their sentence being announced and fetters rivetted on at parade on the 9th May. This degrading aggravation of punishment was the spark that fired the mutiny. Next evening the troops in Meerut rose, and, aided by the bazaar rabble, killed every European they met, released their comrades from the gaol, and went off to Delhi. It is unfortunate that there was at Meerut no senior officer capable of dealing with the crisis. There were in garrison two batteries of field artillery, as well as one of the finest cavalry regiments in the British Army, the Carabineers, and a battalion of Rifles. But fatal inaction paralysed the Europeans, and the mutinous soldiery marched unmolested to Delhi. Here the troops soon followed suit; murdered some of their officers, while others escaped, and a number of Europeans of all ages and both sexes was massacred in the

place and in the streets. An army was at once organised for the recovery of Delhi, while forces were collected in the Punjab, which remained loyal under the strong hand of John Lawrence. The British columns having defeated the rebels who opposed them at Badli-ki-Sarai, arrived before Delhi on the 8th June, and began the long seige which terminated with the capture of the city in the middle of September, when the heroic Nicholson fell in the hour of victory. Meanwhile the mutiny had spread to other corps of the Bengal Army. The native troops at Cawnpore rose on the 4th June, massacred the Europeans of the Garrison who surrendered on the 27th, while the women and children were butchered on the 15th July, the day before Havelock's relieving column defeated the Nana and entered Cawnpore. There was mutiny at many other places during this period not only at stations north of the Jumna, but in Central India, and in Rajputana, where the disaffected troops of the Gwalior Contingent were stationed at Gwalior, Neemuch, Nasirabad and other cantonments. At Jhansi a general massacre took place, when the Europeans unwisely surrendered to their pitiless foe. Throughout Bundelkhand and the Central Provinces the wilder spirits of the country rose and banded with the mutineers. With few exceptions the Bombay Army remained loyal, as did the Madras Army and the Hyderabad Contingent, although there were some isolated out-breaks at Hyderabad and at Sholapur. But generally speaking the rebellion did not spread south of the Tapti River. On the 30th September the troops at Lucknow rose, and there began the long and glorious defence of the Residency by the beleaguered garrison under Sir Henry Lawrence; Lucknow was relieved by Havelock and Outram on the 27th September, but the rebel hold on the defenders was not relinquished until Sir Colin Campbell advanced and drove off the mutineers with terrible slaughter two months later. Having relieved Lucknow, Sir Colin Campbell marched to Cawnpore, where General Windham had been driven into the intrenchments, and was with difficulty holding his own against the Gwalior Contingent under Tantia Topi. On the 6th December 1857, Cawnpore was relieved, and the rebels retired on Kalpi. It was not until 1858 that the small army under Sir Hugh Rose, the most skilful and enterprising leader of those times, marched through Central India, relieving many beleagured places, fighting many pitched battles, and avenging the massacre of Jhansi in the storm and capture of that place, at the capture of Kalpi, and at Gwalior where the Rani of Jhansi was killed at the head of her troops, and Sindia was restored to the capital from which he had been expelled.

Reorganisation after the Mutiny.

When the country had been pacified, the Government of India was assumed by Queen Victoria, and the East India Company ceased to exist. The Company's European regiments were transferred to the crown, and a regular system of relief of British regiments employed in India was instituted, the charges being paid out of the Indian revenues. The Bengal Army had almost disappeared; and while a new army was raised in that Presidency, the Madras and Bombay armies were also reorganised Native artillery was abolished, with the exception of some mountain batteries and the field batteries of the Hyderabad Contingent The officering of the reorganised armies was carried out by the organisation of a Staff Corps for each Presidency, on which the officers were all borne on a general list and supplied to regiments and to the staff. On completion of the reorganisation in 1863, the armies had the following strength :—

Bengal Army—19 Cavalry and 49 Infantry regiments.
Madras Army—4 Cavalry and 40 Infantry regiments.
Bombay Army—7 Cavalry and 30 Infantry regiments.
Punjab Frontier Force—6 Cavalry and 12 Infantry regiments.
Hyderabad Contingent—4 Cavalry and 6 Infantry regiments.
Other Local Corps—2 Cavalry and 5 Infantry regiments.

The total strength amounted to 140,000 men; and there were in India 65,000 British soldiers. The regiments were officered by a reduced cadre eventually fixed at eight British officers to each corps, except that the Hyderabad Contingent and other local corps had an establishment of four only. The promotion of officers was made dependent on length of service, 12 years to Captain, eventually reduced to nine years, 20 years to Major, reduced to 18 years, and 26 years to lieutenant-colonel. The Staff Corps system, which still continues in fact though not in name, has the disadvantage that it entails the frequent transfer of officers from one corps to another.

Minor Campaigns.

During the period succeeding the mutiny, until 1879, when the second Afghan War began, there were many minor campaigns, including the Ambeyla expedition, the China War of 1860, and the Abyssinian War, when Napier of Magdala, who had fought in the Sikh Wars and in the Mutiny, commanded the expeditionary army. There followed the Afghan War, in which the leading figure was Lord Roberts. There were expeditions to Egypt and China, and various frontier campaigns, the most important of which was that on the North-West Frontier in 1897, since when that turbulent country has been generally quiet. There were also the prolonged operations following on the annexation of Burma, several campaigns in East Africa and Somaliland, and the expedition to Lhasa. But since the Afghan War the Army of India, except that portion of the British garrison which was sent to South Africa, has had little severe fighting, although engaged in many arduous enterprises.

Reforms.

The twenty years which began in 1885 witnessed many reforms and augmentations of the Indian Army, due to preparations to resist the menace of the Russian advance towards India. The composition of the Army was improved by the elimination of unwarlike men from the ranks. In pursuance of this reform many Madras regiments were reduced and replaced by corps composed of more virile races. "Class" troops and

companies were formed instead of men of every caste and creed being mingled in the ranks and in some cases class regiments were raised. But it is generally held that, it is better to form regiments of class companies and troops, although the class regiment has its advocates among those who hold that such an organisation facilitates segregation in case of trouble. In 1887 we find the British Army in India numbering about 74,000 and the Indian Army 153,000 men. In 1888 Indian battalions were grouped in threes, each with a regimental centre, and reserves for the native army were instituted; these have been gradually augmented until the establishment numbers 25,000. In the following year Imperial Service troops, to be placed at the disposal of the British Government in case of emergency, were raised in Native States. These number 21,000 men officered by Indians and having Inspecting Officers furnished by British Officers of the Indian Army. In 1891 the Staff Corps of the three Presidencies were amalgamated, the first step in the abolition of the Presidency distinctions, furthered two years later by the abolition of the appointments of Commander-in-Chief of the Madras and Bombay Armies. While the fighting strength of the Army had been augmented and improved during all these years, the administrative services had not been neglected. The Supply and Transport services were improved and the Ordnance and Military Works were reorganised, and measures were taken for the improvement of defences, mobilisation and equipment. Changes were made in regimental organisation, and the pay and allowances of the troops were raised from time to time.

The number of British officers has been augmented at intervals. The establishment in the native infantry formerly consisted of a Commandant, two Wing Commanders, and five Wing Officers. In 1900 the Double Company system was instituted, each pair of companies being placed under a Double Company Commander, the Wing Commanders being abolished. The establishment of regiments now includes 13 or 14 British officers, squadrons and companies being commanded by native officers, of whom there are 16 in a regiment, Risaldars and Subadars commanding troops and companies, while Jemadars are their subalterns.

Lord Kitchener's Work.

The most momentous changes that have taken place in the Indian Army since the post-mutiny reorganisation were carried out under the regime of Lord Kitchener, who assumed the office of Commander-in-Chief at the end of 1902. When Lord Kitchener arrived in India, the Commander-in-Chief had only executive command of the Army, with an Adjutant-General and a Quartermaster-General as his Chief Staff Officers. There was no General Staff, the Staff of the Army in India being divided between the departments of the Adjutant-General and Quartermaster-General. The administrative departments of the Army were under the Military Member of the Governor-General's Council, of which the Commander-in-Chief was an extraordinary member. The condition of affairs was not satisfactory. The proposals of the Commander-in-Chief regarding measures involving expenditure had to be submitted to the Financial Department through the Military Department, which had entire control also of the Supply and Transport, Ordnance, Military Accounts, Remount and Military Works Departments. The consequence was frequent differences of opinion between the Military Department and Army Headquarters.

Lord Kitchener organised a General Staff, and established a Staff College at Quetta for the training of officers in the requisite duties; a Chief of the Staff was appointed, and the proper division of the work of Staff Officers was made, those of the General Staff being made responsible for the branch dealing with the Art of War, including the training of troops, while routine and administrative duties were undertaken by officers of the Adjutant-General's and Quartermaster-General's Departments.

On arrival in India Lord Kitchener found that the military system, originally constituted on sound lines, had gradually departed from the intention of its founders, and much of the power properly belonging to the Commander-in-Chief had been usurped by the Military Department, while a succession of economical Finance Ministers had so cut down the military estimates and held the purse-strings so tightly that it was impossible to force through any costly measure for the defence of the country. The military chaos which was the slow growth of a hundred and fifty years of constantly changing conditions required remoulding into an orderly cosmos. The army was in many respects, with its want of proper organisation for external war, its ponderous and antiquated administrative system, its faulty distribution in units scattered on no known strategical plan, more suited to the circumstances of a bygone age, when the country had only recently been conquered and troops had to be retained at remote and isolated stations to overawe the inhabitants. While the Commander-in-Chief was a strong and determined man with a genius for organisation, the Viceroy was also a great personality, holding strong convictions, and naturally a champion of the civil power. Lord Kitchener wished to remove the obstruction of the Military Department. Lord Curzon could brook no weakening of the power of the Civil Government. The question was not merely one of the abolition of a Department which had grown obsolete in its methods. It was a question of the status of the Chief Military Authority in the country.

Military Department Abolished.

On the recommendation of a Committee composed of Lord Roberts, Sir George White and Sir Edward Law, the Military Department was abolished, and the Military Supply Department established in its place in 1905. Lords Curzon and Kitchener again came into conflict regarding the personnel of the new Department, and the former resigned. The Commander-in-Chief now set about the task of reform. He had since his arrival in India been studying the situation, reviewing the state of our military organisation, grasping its defects and contemplating its needs. The advance of Russia towards the Hindu Khush dominated the situation as it had done for the best

part of a hundred years. Under the old chaotic system the mobilisation scheme provided for the despatch of two armies, one through the Khyber, the other by way of Quetta to Kandahar. From the North-West alone, whence the conquering hordes of all the invaders whose march is recorded in history had poured from time immemorial, was the Empire of India subject to menace from without.

But under the system then existent the measures arranged for defence provided for a force of only four Divisions of all arms. This force was not only inadequate in numbers but in capacity for expansion. Its distribution and organisation were more suited for policing internal India than to contend with an external foe. The troops were distributed in Districts under generals whose commands were geographical in designation and in area. Here were no complete Army Corps, Divisions, and Brigades ready to take the field. In case of war the troops for the field army were to be drawn from all parts of India, the various units being sorted out into Brigades and Divisions on arrival at the base of operations, and provided with a scratch lot of generals and staff officers for the occasion.

Army Re-distributed.

It was in the reorganisation of the scattered and heterogeneous forces of the Indian Empire that Lord Kitchener's great work lay. Some steps had already been taken towards the abolition of those Presidency distinctions which formerly divided the Indian native forces into three armies supplemented by a congeries of local forces. But he found three armies, each confined to its own geographical limits, beyond which its units and its personnel did not ordinarily proceed; or when they did, they carried the chains which linked them to their respective Presidencies. The units of the Indian Army were renumbered, a fruitful cause of confusion being thus eliminated; Presidency and local distinctions were abolished, and a homogeneous army, though composed of heterogeneous races, free to benefit by the experience of service in any part of India, was created. The experience of 1857 proved the measure of safety provided by the Presidential system of three armies with nothing in common between them; but the new regime considered that the conditions of fifty years ago were obsolete, and had been entirely changed by increased facilities and rapidity of communication throughout the Empire.

The whole army was formed into nine Divisions, exclusive of the Burma Division, each with its proper complement of the three arms, under its General with staff complete. These Divisions were organised for war; each one could take the field intact, leaving behind sufficient troops for the maintenance of internal order. Arrangements were made for the organisation of supply and transport. The reserve was not sufficiently large to supply the wastage of war; it was expanded, the infantry reserves being augmented, while the cavalry was included in the system. Small and isolated stations were by degrees abandoned, the Divisions, or at least the Brigades, being assembled with a due regard to strategical requirements and to the necessities of training, though some are extended over a wide area of country. The nine divisions were distributed between two armies, each with its Commander, their heads resting on the main routes at Quetta and Peshawar.

The Military Supply Department, with its Member on the Governor-General's Council, was abolished in due course; an Army Department was created, to deal with much of the business carried on by its predecessor, with a Secretary in Charge. The Commander-in-Chief is now the only Military Member of Council, and it is a question whether he has not a burthen greater than one man can bear. The recommendations of Lord Robert's Committee have been ignored, for that Committee recorded the opinion that "the concentration of the whole responsibility of Supply of the Army under one head, if that head is to be the Commander-in-Chief, would be opposed to all modern principles in regard to Armies." It was feared that the system now obtaining would lead to the diversion of too large a portion of the time of the Commander-in-Chief from his natural military duties; and it certainly appears that the functions and status of that high officer have largely altered.

Indian regiments are numbered consecutively, the infantry from 1 to 130, the cavalry from 1 to 39. They have subsidiary titles based upon their composition, their territorial origin, or the names of distinguished officers with whom they were connected.

British troops are periodically relieved from England and the Colonies, regiments ordinarily being some fifteen years in India, where they are kept on a war-footing by drafts sent from the regimental depots. Native troops consist of every warlike class, a great variety of races being found in the ranks. Gurkhas and Sikhs to a great extent, are organised in class regiments. There are Rajputs of both Oudh and the United Provinces; Jats, Dogras, Mahrattas, Pathans, Baluchis and Hazaras. Mahrattas are enlisted in Regiments of the old Bombay Army; Mahomedans from the south of India and from Hindustan are found in the ranks of many corps, and most of the Frontier tribes furnish their quotas.

The native officers generally rise from the ranks, but some are given direct commissions, although this system has not been largely adopted. The volunteers form a valuable and efficient body of men, who would be most useful in emergency, having a good knowledge of the use of arms and furnishing some of the best shots in the country.

The Military Police is largely composed of warlike races, especially in Burma, which is mainly garrisoned by these corps, while in Central India the aboriginal Bhils find employment in the ranks. These, however, though a useful auxiliary, do not form part of the Army, and serve under the orders of the Civil Government.

The Divisions of the Army are distributed as follows, their headquarters being at the Stations indicated.

Northern Army.		Headquarters-Murree.
1st Division	..	Peshawar
2nd ,,	..	Rawal Pindi
3rd ,,	..	Lahore
7th ,,	..	Meerut
8th ,,	..	Lucknow

Indian Brigades.		
Derajat Brigade	..	Dera Ismail Khan
Bannu Brigade	..	Bannu
Southern Army.	Headquarters—Ootacamund.	
4th Division	..	Quetta
5th „	..	Mhow
6th „	..	Poona
9th „	..	Ootacamund
Burma Division	..	Mandalay

Services of the Sepoy Army.

The history of the Army of India has now been traced since its inception down to the present time. The military history of the world presents no more remarkable spectacle than that of the great army of soldiers of fortune which, led by a few British officers, has carried our flag into every corner of the Eastern Hemisphere during the past hundred and fifty years. Soldiers by birth and breeding the sepoys of Hindustan and of the four quarters of India have served the Empire from Northern China to Ceylon, from Egypt to the islands of the Eastern seas, in Belgium and in France. In the conquest of India itself, in seconding the valour of a handful of British soldiers, they have borne a conspicuous part The very men who opposed us so courageously in war—Sikhs, Gurkhas, Pathans of the North-West Frontier, Jats and Rajputs—have fought with no less valour in the ranks of our army. They sailed to the conquest of Bourbon, Mauritius and Java. With Cornwallis and Harris they traversed the passes which led them to Mysore and Seringapatam. Under Stringer, Laurence, Clive, Eyre Coote, Lake and Wellesley they helped to oust the French from Southern India. The great theatre of war in which they fought was diversified by every physical feature and characterised by considerable varieties of climate. From Chitral to Makran our soldiers have followed in the footsteps of Alexander the Great. On the banks of the Hydaspes, on the very ground where the Macedonians defeated Porus two thousand years before, they fought the battle of Chillianwala against the Sikhs, who have themselves since been among the bravest soldiers of our army. Every pass on the frontier traversed by the invaders of old contains the bones of brave men who have fallen in our service. The rude mountaineers of the frontier have eagerly entered the ranks of our army. Beyond the limits of India our soldiers have entered most of the capitals of the East. They have carried the flag to Cabul, to Cairo, to Lhasa, to Peking, to Ava and to Mandalay. Sepoys accompanied Baird, and eighty years later Wolseley, to the Nile. The dark page of the Mutiny is itself illumined by many gallant deeds performed in our service by the native soldiers of the Empire. Lucknow was not defended by Europeans alone; among the bravest men on the Ridge before Delhi were men of Indian races; in the glorious campaign in Central India 1858 the wings of Sir Hugh Rose's Army were composed of native cavalry; the mutiny veterans who tottered into the arena at the Coronation Durbar at Delhi had in their ranks many soldiers of native race.

The Army and the War.—In 1914, when the Great War broke out, H. E. the Viceroy, speaking on behalf of the whole country, pledged every man, British and Indian, to the service of the Raj, and a great force of all arms, estimated to reach 200,000, was despatched to the seat of war in France and Belgium, in East Africa, Egypt, Turkish Arabistan and Shantung. The Force in France constituted the only trained reserve available in the British Empire at the time. Its services therefore must be measured not only by what it did, but by the fact that it was the only force available for the duty. It took part in some of the hardest fighting, and this in the strange conditions of the cold, the wet and the mud of Flanders, in trench fighting, which was even more strange to the Indian troops than to those of the European armies, and under artillery fire which subjected them to an unprecedented strain. The gradual strengthening of the British forces and the pending advent of another winter induced a fresh consideration of the employment of these troops in France, and towards the close of 1915 it was decided not to subject them to the ordeal of another campaign in the European winter. The Indian Expeditionary Force was therefore withdrawn, with the exception of the Cavalry Division. It was re-constituted in Egypt and distributed for service either in India or on some other part of the battle front. One cavalry brigade was subsequently withdrawn. Before the Force left France, His Majesty the King-Emperor sent the following message, which was delivered by the Prince of Wales on November 21 and subsequently issued in the form of a communique:—

"Officers, non-commissioned officers and men of the Indian Army Corps,—More than a year ago, I summoned you from India to fight for the safety of my Empire and the honour of my pledged word on the battle-fields of Belgium and France. The confidence which I then expressed in your sense of duty, your courage and your chivalry you have since then nobly justified. I now require your services in another field of action, but before you leave France, I send my dear and gallant son, the Prince of Wales, who has shared with my armies the dangers and hardships of the campaign, to thank you in my name for your services and to express to you my satisfaction.

"British and Indian comrades in arms, yours has been a fellowship in toils and hardships, in courage and endurance, often against great odds, in deeds nobly done in days of an ever-memorable conflict. In a warfare waged under new conditions, and in peculiarly trying circumstances you have worthily upheld the honour of the Empire and the great traditions of my army in India.

"I have followed your fortune with the deepest interest and watched your gallant actions with pride and satisfaction. I mourn with you the loss of many gallant officers and men. Let it be your consolation, as it was their pride, that they freely gave their lives in a just cause for the honour of their sovereign and the safety of my Empire. They died as gallant soldiers, and I shall ever hold their sacrifice in grateful remembrance. You leave France with a just pride in honour of the deeds already achieved and with my assurance of confidence that your proved valour and experience will contribute to further victories in the fields of action to which you go. I pray God to bless and

guard you and to bring you back safely when the final victory is won each to his own home, there to be welcomed with honour among his own people."

Lord French's Tribute.—The message which Viscount French issued to the Indian Corps was officially published in India, some six months later than that of the King. Lord French describes the British troops of the corps as having borne themselves in a manner worthy of the best traditions of the Army.

The Indian troops (he adds) have shown most praiseworthy courage under novel and trying conditions, both of climate and of fighting, and have not only upheld but added to the good name of the Army which they represent. This is all the more praiseworthy in view of the heavy losses among the British officers which deprived the Indian ranks of many trusted leaders whom they knew well, and of the fact that the drafts necessary to maintain your strength have frequently had to be drawn from regiments quite unconnected with the units they were sent to reinforce. You have done your work here well . . I thank you for the services you have rendered while under my command, and trust that the united efforts of the Allies may soon bring the enemy to his knees and restore peace to the world.

A no less emphatic tribute, and one taking a wider sweep, was paid by the Secretary of State for India, when presiding at the lecture of Sirdar Daljit Singh, of the India Council, upon the Sikhs at a meeting of the Indian Section, Royal Society of Arts.

Mr. Chamberlain said that the Indian Army had served for the first time in a great European War; it had been employed not only in France, but in Egypt, in Gallipoli, at Aden, in East and West Africa, and in Mesopotamia. Wherever there had been work to do and stout hearts had been needed, India had sent her sons to play their part with the men of other portions of the Empire in defence of their Sovereign's Crown and of the liberties of the Empire to which they belong.

Statement by Lord Hardinge.—In July 1917, Lord Hardinge made a statement in the House of Lords showing the extent of the expeditionary forces sent from India. He said:—

"In August and the early part of September an Indian Expeditionary Force of an Indian army corps of two divisions, under the command of General Sir James Willcocks, and one cavalry division was sent to France, and a second cavalry division was sent to join this force in the following November. It may be of interest to remark here that the theatre of action of these splendid Indian divisions was, in the first instance, restricted to the Mediterranean garrisons and the Sudan, and it was due to the assistence of the Government of India that they were sent to France, where they arrived in time to fill a gap that could not otherwise have been filled, and there consecrated with their blood the unity of India with the British Empire and their loyalty to the King Emperor. There are very few survivors of those two splendid divisions of infantry. But India has a land frontier, needing at all times a watchful eye, and at times such as these giving cause for special care. To guard that frontier three divisions were immediately mobilised. In September, 1914, by the order of His Majesty's Government, a mixed division of troops was sent to East Africa, the co-operation of India with this force being limited to the supply of personnel, transport, equipment and ships. In October and November 1914, two divisions of Indian infantry and one brigade of cavalry were sent to Egypt. It was not till September, 26, 1914, by which time eight divisions had already been mobilised and sent either abroad or to the frontier, that the possibility of action at the head of the Persian Gulf was foreshadowed by the Secretary of State, and it was on October 31 that Turkey having entered the war against us, hostilities commenced with the seizure by an Indian brigade of the mouth of the Shatt-el-Arab. This brigade was reinforced to the strength of a division before the capture of Basra on November 23 and in three months' time increased to an army corps of two divisions. Of these 10 divisions of infantry and two divisions and two brigades of cavalry, enumerated above, seven divisions and all the cavalry were sent overseas. But in addition to these organised forces 20 batteries of artillery, and 32 battalions of British infantry, the flower of the British army, many of them 1,000 strong and more, were sent to England. A battalion of Indian infantry was sent to Mauritius, another to the Cameroons, and two battalions to the Persian Gulf, while Indian troops also co-operated with the Japanese at the capture of Tsingtau. Approximately 80,000 British officers and men and 210,000 Indian officers and men, all fully trained and equipped were despatched overseas. I would here remark that the largest Indian expedition ever previously sent overseas amounted to 18,000 men.

"A comparison between the ordinary establishment of the Army in India and of the units sent overseas in connexion with various expeditions shows in a striking manner the military effort made by India to assist the Empire. Of the British establishment in India, seven regiments of British cavalry out of nine were sent overseas: 44 British battalions of infantry out of 52, and 43 batteries of Royal artillery out of 56; while of the Indian establishment, 20 regiments of Indian cavalry out of 39 and 89 battalions of Indian infantry out of 138 were sent abroad. In return for these troops, India received many months after the outbreak of war and the despatch of Indian divisions overseas, 29 Territorial batteries and 34 Territorial battalions, but these were unfit for immediate employment on the frontier or in Mesopotamia until they had been entirely rearmed and equipped and their training completed. Many of them were sent later to Mesopotamia, whether as units or drafts for Regular regiments, and all did splendid service. It is, however, a fact that for the space of some weeks before the arrival of the Territorials the British garrison in India was reduced to about 15,000 men. The safety of India was thus imperilled in the interests of the Empire as a whole. In such a cause I was naturally prepared to take risks, and I took them confidently because I trusted the people of India, and I am proud to say they fully justified my confidence in them. From the moment of the outbreak of war, and after, it was the steady policy of the Government of

India to give readily to the home Government of everything it possessed, whether troops or war material. In the summer of 1914 India was absolutely ready for war in the light of what was then accepted as the requisite standard of preparation of her military forces and equipment. The Army was at war strength, the magazines were full, and the equipment was complete. Thanks to these facts, India was able, not merely to send her divisions to France and elsewhere, but also to supply to England within the first few weeks of the war 70,000,000 rounds of small-arm ammunition, 60,000 rifles and more than 550 guns of the latest pattern and type. In the first week of the war some 530 officers of the Army, who could ill be spared, were handed over to the War Office, and nearly 3,000 additional combatant officers have been sent overseas since the war began."

The Fighting Races.

The fighting classes that contribute to the composition of the Indian Army are drawn mainly from the north of India. Of these there are 35 squadrons and 214 companies of Sikhs, who thus furnish a great part of the strength of both Infantry and Cavalry. The Sikhs, of whom an account has already been given, are distributed throughout the Punjab. Mahomedans of various races contribute a still larger proportion to both arms. These are drawn both from the north and south of India, as well as from beyond the frontier, where the tribes contribute 56 companies to our Infantry; while the Musalmans and Pathans of India itself furnish between them 68 squadrons of Cavalry and 250 companies of Infantry. These are all excellent fighting men, hardy and warlike, who have furnished soldiers to all the great powers of India for many hundreds of years. Large numbers of Mahomedans were to be found in the ranks of the Mahratta armies which opposed us during the early part of the last century. As Cavalry the Mahomedans are perhaps unequalled by any other race in the East, being good horsemen and expert men-at-arms.

Next to these in point of numbers are the little Gurkhas of Nepal, of whom 161 companies serve in the ranks of the Infantry. These, with the exception of one company in the Guides, are formed in twenty complete battalions. As fighters in the hills, the Gurkhas are unsurpassed even by the Pathans of the North-West Frontier. Their proficiency as soldiers was first proved in the Nepal War of 1814, when they fought against us and has subsequently been displayed on many a field in the ranks of our army. The cheerful and steady discipline of the Gurkha has always rendered him a valuable soldier, while his proficiency in the use of arms, including the national *Kukri*, has made him terrible in war. While such a wonderful marcher in the hills, the Gurkha soon tires in the plains.

The professional military caste of India from time immemorial has been the Rajput, who inhabits not only Rajputana but the United Provinces and Oudh. Of fine physique and martial bearing, these warriors of Hindustan formed the backbone of the old Bengal Army, and have sustained the British flag in every campaign in the East. Their high caste and consequent prejudices in no way interfere with their martial instincts and efficiency in war, this class now furnishes 10 squadrons of Cavalry and 100 companies of Infantry in our Army. Other classes which are found in the ranks are Jats, Dogras, Brahmins and Mahrattas. The Jats are a fine and warlike race, found in the Delhi and Rohtak districts and adjacent territory. It was these people who held out so bravely at Bharatpur and repelled three attacks delivered against their stronghold by Lord Lake's army in 1805. They now furnish us with 21 squadrons of cavalry and 60 companies of infantry. Dogras are good and steady soldiers found in the hill districts of Punjab. The ruling Chief of Kashmir is of this caste, of which are 1 squadrons and 56 companies in the army. Brahmins are not now largely enlisted; while the Mahrattas, famous as predatory horse in the historic past, now compose 54 companies of infantry. They are chiefly recruited in the Deccan and the Konkan. Nor must we forget the Hill Rajputs of Garhwal, good and gallant soldiers, who supply two battalions; and the low caste men of Madras so efficient as Pioneers and Sappers. Some 9,000 Madrasis are still in the ranks.

New Regiments.—In 1916 two important steps were taken. In response to a strong desire manifested, the Government accorded sanction to the raising of an **Anglo-Indian Regiment**. By Anglo-Indian it should be understood that a change in nomenclature was made in the Census of 1911. The term Anglo-Indian used to connote the Englishmen resident in India: by the census it was made to embrace what used to be called the Eurasian, or Domiciled community, terms which have now passed into desuetude. Recruiting proceeded all over the country and the men enlisted were sent to Quetta to be trained. In October, 1917, the Hon. Secretary, Federal Council Anglo-Indian Associations of India stated that the Adjutant-General in India had made the following report:—"I am directed to say that the General Officer Commanding Force 'D' has reported favourably on the services rendered by Anglo-Indian Units employed in Mesopotamia, and has stated that he would be glad to have more of them, if available. In these circumstances I am to request that you will use every endeavour to accelerate recruitment of Anglo-Indians with a view, if possible, to the formation of new units. There is no objection to members of the Indian Defence Force (if eligible) joining the Anglo-Indian Force, and all Recruiting Agents should be instructed to approach such members with a view to their enlistment."

In August, a **Bengali double company** was raised. Since the advent of the British to India if not before, the Bengalis have not been recruited amongst the fighting races and recruiting has not been practised. This exclusion during the war aroused protest, and at Dacca on August 7th, Lord Carmichael, Governor of Bengal, made the following announcement:—

"The Viceroy has been considering the question with the Commander-in-Chief and other members of his Government. They have determined to try as an experimental measure to raise a double company of infantry composed of Bengalis on precisely the same terms as are offered to the Indian Army generally. The

enlistment will be for the period of war with option to the soldier of remaining if he chooses in the service after its conclusion. The double company when formed will be located on the frontier for training and when properly trained may be sent on field service. That the Government of India should be willing to consider this now, while the war is going on, shows that they have not neglected the feelings of Bengal, that they should be willing to make an experiment is a proof that they do sympathise with us, that they do believe that Bengalis are loyal and are devoted Surely it is the duty now of every one who loves Bengal, to see that the experiment shall succeed, to show that emotional and impetuous as the Bengalis undoubtedly are they are generous enough to exercise self-control that they are ready to submit to discipline and will do their part when asked just as well as other people do their part without demanding any exceptional or better terms."

The Bengalis had already raised an Ambulance Corps, which did good service in Mesopotamia. The announcement was received with general satisfaction, and the required number of men was readily forthcoming.

Central Recruiting Board.—Since the outbreak of war recruiting in India has expanded to very great dimensions and now deals with the manifold classes of men required for the several theatres of a great war. The Adjutant-General had during the war not only to keep existing establishments up to strength, but to form new units of combatants, to enrol four corps for France or for Mesopotamia and to enlist railway men, dock-yard hands and marine ratings. Besides all those classes of skilled labour, whose services are necessary for the feeding, the transport and the communications of modern armies, the adequate fulfilment of these tasks has become too heavy for mere departmental management. Consequently in order to organize the man power of India more effectively to meet the growing demands made upon it the Governor-General in Council constituted in July, 1917, a central recruiting board of which the Hon. Sir William Meyer accepted the presidency.

To enable the board to watch the progress of recruiting and to ensure the co-operation of the military and civil authorities throughout the country local Governments formed provincial recruiting boards containing a large civilian and non-official element in the shape of landowners, business men and leaders of public opinion. These provincial boards helped to keep the central board in touch with every aspect of the question.

Developments in 1917-18.

During the year 1916-17, in addition to the very heavy drain of men required for the reinforcement of existing Indian units in all the various theatres of war, 13 fresh battalions of Indian Infantry were placed at the disposal of the War Office for service in Mesopotamia; 12 new battalions were raised and 12 more existing battalions, the bulk of which had been captured at the fall of Kut, were reformed and brought up to strength in India. Three new Indian battalions were furnished to Egypt. A Field Artillery Battery of Anglo-Indians was formed and despatched for service in Mesopotamia, and various new Sapper and Miner and Signal units were raised, the strength of existing units being at the same time increased. The establishments of Indian cavalry regiments were raised to 800 Indian ranks, and 796 horses and camels, and depots were raised to 275 Indian ranks each. In order to facilitate the recruitment and supply of followers for service with field forces overseas, central depots were established at Meerut, Kirkee and Lucknow. Central reserve depots from which departmental and regimental followers could be furnished for service overseas were also formed at Meerut and Ahmedabad. Six labour and three porter free corps were raised for service in Mesopotamia, and India accepted the liability to find 50,000 labourers for France. It must be remembered in this connection that there was a serious shortage of labour in India itself which greatly hampered certain important industries, especially coal. Thirty-five new transport units (mule, bullock, pony and camel) were formed, and with the exception of some mules, all animals were obtained in the country. Two Indian Mechanical Transport companies were raised and equipped.

The foregoing details are taken from the Report on the Administration of India for 1916-17, published in November 1918, and it is not possible as yet to give equally full details concerning the development of the Army in 1917-18 and the great recruiting effort which distinguished the year 1918. In a speech which he made in Council in September 1918, H. E. the Viceroy said that the central Recruiting Board had set itself to the task of raising half a million men during the year. Over 97,000 combatant and nearly 55,000 non-combatant recruits were enlisted in May, June and July. This continued increase involved a heavy increase in Indian expenditure on Military services which rose from just over £21,000,000 in 1912-13 to more than £28,000,000 in 1917-18 and for 1918-19 it is estimated at £29,000,000.

Commissions for Indians.—In August, 1917, it was announced that His Majesty's Government had decided to remove the bar which had precluded the admission of Indians to commissioned rank in His Majesty's Army. Under this scheme a number of Indian gentlemen have been granted substantive commissions in recognition of their war services. It has also been decided to grant (*a*) a certain number of King's commissions, conferring honorary rank in the Indian Army, to selected Indian officers who have rendered distinguished service, not necessarily during the present war, and who, owing to age or lack of educational qualifications, are not eligible for substantive King's commissions. Such honorary commissions will carry with them special advantages in respect of pay and pension; and (*b*) a certain number of temporary but substantive King's commissions in the Indian Army, to selected candidates nominated partly from civil life and partly from the Army. The Government of India also decided to nominate ten Indian gentlemen annually during the war, for cadetships at the Royal Military College, Sandhurst.

Improvements in Conditions.—Many improvements have been made in the pay of the soldier and the conditions of service. They are thus summarised in the Report on the Moral and Material Progress of India for the decade 1901-02 to 1911-13. The decade began with an increase of the pay of British troops due to the adoption in India of the proposals of the Home Government for an increase of 2*d.* a day from the 1st April 1902. This involved an additional charge on Indian revenues of some £225,000 a year. In April 1904 a further increase of from 4*d.* to 7*d.* a day, was given in the form of service pay. The whole of the service pay issued in India was in accordance with the decision of the Lord Chief Justice, acting as arbitrator between the Imperial and Indian Governments, borne by the latter, the extra charge being thus raised to about £700,000 a year. From the 1st January 1909, in accordance with the intention announced in the Proclamation of the King Emperor on the fiftieth anniversary of the transfer of Government to the Crown, a general increase of pay for all ranks was granted to the Indian Army, and arrangements were made for the free supply of fuel by Government at a cost of £427,000 a year. The increase was Rs. 3 a month for non-commissioned officers and men of the silladar cavalry and Rs. 2 for other troops. Other measures that may be noticed were the raising of the kit-money granted on enlistment and the introduction of a boot allowance, the grant of free grass to silladar cavalry when on the march or at manœuvres and of free passages by rail (within certain limits) for men called home on urgent private affairs—all introduced in 1906; the revision and improvement of the pension rules of the Native Army, and the abolition of the punishment of flogging in time of peace, except for offences for which that punishment is permissible in civil life, in 1907-08; and a revision of the rates of pay of captains and subalterns of the Indian Army, and of regimental salaries, involving a considerable addition to the emoluments of the junior grades in 1909. Since 1910, considerable progress has been made with the improvement of the accommodation for the native troops. It had become obvious that this improvement was a matter of urgency in many cases, and with the persistent rise in prices and wages comfortable and durable buildings could no longer be constructed without a considerable increase of expenditure. In the new lines, a sound type of construction has been adopted, and the work has been entrusted to the Military Works Service instead of to regimental agency. Finally a bonus of half a month's pay, was granted to all non-commissioned officers, and men and reservists of both the British and Indian armies, and to the equivalent ranks of the Royal Indian Marine, at the Coronation Durbar in 1911, at a cost of about £166,000. On the occasion of the Coronation Durbar of 1902, a money grant to be spent at the discretion of officers commanding was made to all British and native troops.

Improvements during the War.

The Government of India introduced during the wars several marked changes affecting the **pay and prospects** of the Indian Army. F example, the rate of *batta* given on fie service has been considerably increased for combatant ranks: the Jemadar's has be increased from Rs. 7-8 to Rs. 11 a mont the Sepoy's from Rs. 1-8 to Rs. 5. Sillad cavalry who received no *batta* before, now g it at the above rates. Indian troops and f lowers serving in Mesopotamia, East Afr and eastern theatres of war receive appro mately a 12½ per cent. increase of pay, those Europe a 25 per cent. increase, as special fi allowances.

Bonus and Pay.—The pay of the Indi commissioned and non-commissioned ran was increased in January 1917. The Jemada for instance, was raised from Rs. 50 to Rs. a month, and the Havildar's from Rs. 18 Rs. 20. In June 1917 a bonus of Rs. 50 decided upon to be given to every combat recruit, Rs. 10 of this is paid on enlistment, a the balance when the medical officer of his u passes him fit for service. In January 1 a similar bonus of Rs. 20 was sanctioned for the main non-combatant classes. In Aug 1918 two new war bonuses were decided u to be given during the period of the war:— A recruit's training bonus of Rs. 15 to be gi when he proceeded overseas or completed training,—whichever comes first. (2) A bonus to be given every six months to trai soldiers; Rs. 24 to non-commissioned offic sowars, and sepoys, and so upwards to Risald and Subadars who get Rs. 60. Muleteers the Army Bearer Corps will also receive bonus, though at a lower rate,—Rs. 12 inst of Rs. 24.

Pensions.—The ordinary pensions gi to retiring officers and men of the Indian a have been considerably raised since the outbr of war. The sepoy before the war got no reti pension till after 18 years' service, when he Rs. 4 a month: he now gets Rs. 5 a mo after 15 years and Rs. 6 after 18 years' ser The Jemadar who used to get Rs. 16 a 20 years' service now gets Rs. 24, and afte years' service Rs. 30 instead of Rs. 20. In pensions have been increased in the case of men of 18 years' service: sepoys with less t 15 years' service get Rs. 13 a month for a wo of the 1st degree, Rs. 8 for one of the sec degree, and Rs. 6 for one of the third. Provi has also been made, in addition, by gran disability pensions—on varying scales—for not wounded but discharged owing to ill or incapacity which has been aggravated field service. A sepoy, for instance, of less t 15 years' service discharged for an ailment the 3rd degree) not directly caused but ag vated by active service, will receive Rs. month: another of 15 years' service, wit disability of the 1st degree, will get Rs. month.

More important still are the changes in **fan pensions.** This in the past was granted one member of the deceased soldiers' fa nominated by him; it was not transfer and ceased on the death of the original nomi It did not cease if the soldier's widow, nominee, married again. If then the sol nominated, as he frequently did, his old fa or mother, and they died, or if his widow mar

again, his children and immediate dependents would be left unprovided for. This has now been remedied. The pension is, now transferred to the next dependant when the original nominee dies or ceases to be entitled to a pension; again, if the soldier's widow remarries the pension is transferred to a son or daughter. There is therefore absolute security that the soldier's next dependants, while unable to earn their living, will be provided for.

Rations.—Since the outbreak of war, free rations, together with a messing allowance of 10 annas *per mensem* per man have been granted to all Indian combatants: this, it is estimated, means an addition of Rs. 3-8 a month to their pay. Free rations have also been given to men serving as followers or in Labour Corps. The old **kit-money** has been abolished, and the Army Clothing Department issues necessary clothing, including boots, to the Indian army as a free issue. This free issue of clothing has been extended to the non-combatant services too. Hindustani clothing is issued free, up to a maximum of Rs. 18, to all Indian soldiers invalided from field service, to whom the grant of free rations is also continued.

After-care.—Garrison companies have been formed from pensioned and discharged soldiers, who can still do useful work for the country: a great field has been opened up for pensioners in recruiting depots, labour depots, and other work, and such men are given the pay of rank with which they retired, good service and good conduct pay (if they have earned it), free rations, free clothing and other concessions, in addition to their pensions.

The **Imperial Indian Relief Fund** has administered to special cases of hardship caused by the war. The soldier or follower disabled in war service or unfit for further service from any cause, can obtain training to a trade at **Queen Mary's Technical School** for disabled Indian Soldiers at Bombay, and a similar institute is being founded at Lahore: here they can choose their trade, and employment is found for maimed men. Special attention is being paid at these schools to the interests of blinded soldiers. The provision of free primary education for the soldiers' children has been taken up by many Local Governments. So has the question of priority in Government employment in several provinces now all appointments on a pay of less than Rs. 15 a month are temporary only during the war, and priority is guaranteed to *ex*-combatant soldiers of good record. Finally, when war is over, a big scheme of land grants to Indian soldiers is to come into operation, and a good many similar measures in the same direction,—of rewarding recruits or their families, and villages which have given many recruits, have already been taken by nearly every Local Government.

Reserves.

The Indian Army Reserve dates from 1886. Under existing arrangements, it consists of men with not less than three years' colour service. Men passing into the Reserve still belong to their respective regiments, and come up for two months' training once in two years. In 1904 when the strength of the Reserve was about 24,500 men, it was decided to raise it gradually to 50,000 men, reducing the reserve pay from Rs. 3 to Rs. 2 a month, and also to form an Indian cavalry reserve by extending the system to Silladar cavalry regiments. Reservists obtain a pension after 25 years' total service.

Reserve of Officers.—For some years there has been entertained what was called The Indian Army Reserve of Officers—a small body of trained officers who would be available to replace the casualties amongst the British officers serving with the Indian troops in time of war. This branch of the service was however grievously neglected; the conditions of service were unattractive, the prospects of promotion were practically nil; and the military authorities preferred to rely on the expedient of multiplying the number of British officers serving with Indian troops in order to meet casualties, rather than to train up an effective reserve. This policy tested by the war was found wanting. The casualties amongst the British officers with the Indian regiments were very large indeed; these regiments lost their initiative when deprived of the officers on whom they had been taught to rely, and it was impossible to make the great gaps good from the ordinary officer class, because of their lack of knowledge of the Indian languages and Indian conditions. An appeal for recruits for the Indian Army Reserve of Officers met with a very ready response. The first enrolments reached the substantial figure of fourteen hundred, a very large proportion of whom were drawn from the Volunteer Officers, or from the ranks of special corps like the Light Horse, who are ordinarily recruited from the officer class. The officers selected were put through a rapid course with British and Indian regiments; made to pass a language test, and when efficient were sent to serve with the Indian regiments at the front. They have done excellent service and have suffered many casualties; indeed, without this reinforcement of officers specially acquainted with Indian conditions, the efficiency of the Indian Regiments could not have been maintained. The numbers were raised to over 4,000.

The Imperial Service Troops.

The voluntary movement towards co-operation in the task of Imperial defence that led to the formation of the force of Imperial Service Troops was initiated in 1887 by an offer made by the Nizam of Hyderabad, whose example was at once followed by a number of the leading Native Princes. The troops, which are under regular inspection by British Officers, though available for Imperial service when placed at the disposal of the British Government by their Rulers, belong to the States and are recruited from their subjects. Their armament is the same as that of the Native Army, and in training, discipline, and efficiency they have reached a high standard of excellence. They have done good service on the North-West Frontier and also in China and Somaliland. At the beginning of the decade (1901-02 to 1911-12) twenty-three States between them supplied a total of over 16,000 men. Some

additional offers of contingents have since been accepted, and the total strength is approximately 22,271, towards which twenty-nine States contributed. The total included some 10,000 infantry, and 7,500 cavalry, while transport and camel corps contributed 2,700 and 700 men respectively. Sappers also numbered about 700. Gwalior contributes nearly 4,000 men, and Kashmir over 3,500; Patiala, Hyderabad and Alwar contribute over 1,000 each. On the outbreak of the war practically the whole body of Imperial Service Troops were immediately placed at the unfettered service of the King-Emperor. Many of these offers were gratefully accepted and large bodies of Imperial Service Troops proceeded to one or other of the theatres of the war.

The Imperial Cadet Corps.

The Imperial Cadet Corps was founded in 1901, with the object of providing military training for the scions of ruling and noble families. The Corps consists of about 20 young men of noble birth who have been educated at the Chiefs' Colleges. The course of instruction lasts between two and three years, and the cadets are taught military exercises and military science. Its headquarters are at Dehra Dun.

THE INDIAN DEFENCE FORCE.

For some time before the war began it was realised that the Volunteer system in India was unsatisfactory, and the war made that realisation all the more acute. Chambers of Commerce and other bodies passed resolutions in favour of some form of compulsory service for able-bodied Europeans, but none of the schemes suggested, either for the improvement of the Volunteers or for the creation of a new body, was very definite, nor indeed could it be, owing to the absence of any definite pronouncement by the Government of India as to the function which the Volunteers were supposed to perform in war and peace. It is true that from the outbreak of the war the Volunteers were freely used, especially in Bombay, for a variety of duties normally performed by garrison troops, such as embarkation work and later on for escorting prisoners to Ahmednagar. Volunteers joined the Army and the Indian Reserve of Officers in large numbers, a Volunteer Battery went to Mesopotamia and a Volunteer Maxim gun section went to East Africa; but of the force as a whole no use was made and no compulsory use could be made so long as Section 16 of the Indian Volunteers' Act, which prescribed local limits of service, remained in force.

By the beginning of 1916, however, the gradual withdrawal from India of European troops made it necessary to endeavour to form some scheme by which the Europeans remaining in the country could be employed for its defence. How many Europeans in India were fit to bear arms was not known, nor did the most recent Census figures afford any clue as large numbers had left since August, 1914, and their places were not being filled from England. The first step therefore towards the desired end was the registration of Europeans, and on February 2nd, the **Registration Ordinance**, 1917, was published. By that Ordinance every male European British subject (as defined in the Criminal Procedure Code, 1898) between the ages of 16 and 50 was compelled to register his name; place of residence; date of birth; whether single, married or widower; number of dependents, if any; profession or occupation, if any; name of business; address of employer, if any; and nature of employer's business; whether the work on which he was employed, if any, was work for or under any Government department; whether he had undergone military or naval training of any description, if so what and for what period.

European British Subject.—According to section 4 (1) of the Code of Criminal Procedure, European British subject means:—(1)Any subject of His Majesty, born, naturalised or domiciled in the United Kingdom of Great Britain and Ireland or in any of the European, American or Australian Colonies or possessions of His Majesty or in the Colony of New Zealand or in the Colony of the Cape of Good Hope or Natal, (2) any child or grandchild of any such person by legitimate descent. That definition, as will be seen later, was amended before the passing of the Indian Defence Force Act.

Exception.—Persons in the following categories were non-liable to register but might be called upon to support their claims to such non-liability:—persons not ordinarily resident in British India; members of His Majesty's naval and military forces other than volunteers enrolled under the Indian Volunteers Act, 1869; persons in Holy Orders or regular ministers of any British denomination; persons who have at any time since the beginning of the war been prisoners of war, captured or interned by the enemy or have been released or exchanged.

Failure to comply with the Ordinance is punishable with a fine which may extend to Rs. 500, and failure to notify change of address within seven days is punishable with fine which may extend to Rs. 200.

Registration authorities.—It was provided by a schedule to the Ordinance that these authorities should be in the case of any person in Government employ the head of the department; in the case of any person in the employ of any public authority the chief executive officer of such authority; in the case of any person in the employ of any railway the head of the railway administration; in any other case where no special authority is prescribed the District Magistrate of the district where the person for the time being is resident, or, in the case of a person resident in a presidency town, the Commissioner of Police.

The Bill introduced.—The process of registration was carried out with little difficulty and but few cases of prosecution for failure to register were reported in the Press. Shortly afterwards the Indian Defence Force Bill was introduced (for the full text of the Act, see at the end of this article) and on that occasion **H. E. the Viceroy** explained that volunteering was a broken reed and that there must be

equality of sacrifice. "It is useless," he said, "to spend money on a military force which is bound to be ineffective under the condition and the nature of its existence, so this new force will come under the provisions of the Indian Army Act. It is intended to be an effective military organisation as the British element under this Act is to be dealt with on the same lines as those of the British regulars, so the Indian element will come under the same military conditions which apply to the Indian regular forces, saving the fact in both cases that service is to be within India. I do not think it necessary for me to labour this point. We cannot play at soldiers in these times, nor I hope shall we play at soldiers at any future time."

In introducing the Bill **H. E. the Commander-in-Chief** stated that the service companies would for all intents and purposes be regular units for the time being, and would be clothed, equipped, rationed, and paid as regulars. They would relieve regular units on garrison duty and would be stationed anywhere in India where they might be required. He hoped that their work would be reckoned officially as war service.

In conclusion he said that "though the Indian Defence Force will be a second line force it will be in no sense a second rate force. For, we mean to make it a model of its kind. Its members must realise that we are dealing now with serious soldiering and that personal convenience and other considerations must yield to military efficiency, and to the creation of a spirit of discipline upon which that efficiency so largely depends. The old volunteer force has become an anachronism, it has been replaced at Home by the Territorial Force, and will now be replaced in India by a Defence Force designed to suit local requirements whose development and progress will be watched with the keenest interest."

European British Subjects.—The main alteration in the Bill suggested by the Select Committee to which it was referred related to the definition of the term "European British subjects." It was proposed originally to define that phrase as in the code of Criminal Procedure, but the Committee made it more comprehensive. It retained the referential definition contained in the Bill and brought within the scope of the definition two other classes of persons, namely, persons who within the prescribed period have asserted the status of a European British Subject by lodging form (*a*) with the Registration Authority under the Registration Ordinance, 1917, and persons who are members of a Volunteer corps constituted under the Indian Volunteers Act, 1869. "In the first case," said the Committee in their report, "the person concerned has himself put forward a claim to the status which should not lightly be refused, and in the second case the justification for such a course is that a person who has undergone some form of military training at the expense of the state may well be required to aid that state in the case of need. By this amendment we consider that a considerable extension will be given to the ambit of the definition, and though the change might not commend itself if we were undertaking normal legislation in normal times, we think that at the present juncture it is justifiable." The effect of this change was to include in the Force a number of Goanese and other aliens who had previously been members of the Volunteer Force many of whom were subsequently exempted by the Tribunals from liability to General Service.

Exemption Tribunals.—Hasty drafting of the Bill led to not a little confusion and particularly was this noticeable in the proceedings of the Exemption Tribunals. The grounds on which they could grant exemption were sufficiently clear but what was or was not in the "national interest" was a frequent source of discussion. Nor were the duties of the Selection Committees (which select the men required at a given time for General Service) at first clearly laid down, and it was not until the Tribunals realised that a Selection Committee had power to refuse to select as well as power to select a given man that anything like uniformity of procedure became noticeable among the various Tribunals. But by that time some of the more lenient Tribunals, that in Calcutta more particularly, had either totally or partially exempted numbers of men who would have had little chance of obtaining any form of exemption from those Tribunals which more fully realised the gravity of the circumstances which had made the passing of the Indian Defence Force Act necessary.

The response of **Indians** to the invitation to enrol themselves in the Defence Force was from the first poor. Objection was taken to the terms offered and to the distinction made between Europeans who were compelled to serve and Indians who were only asked to gratify their frequently expressed longing to join the Volunteer force. In May the Government of India issued a resolution on the subject in which they noted with concern the disappointing response made to their appeal and recapitulated the circumstances in which the scheme was initiated. It is, said the Resolution, "a matter of disappointment to the Government of India to find that during the first two months after the passing of the Act only 300 men have been enrolled in place of the 6,000 for which preparations were made. It is felt that all who take an interest in the Defence Force and believe those sentiments of patriotism which have brought it into being, and who have the good name of India at heart will be disheartened to learn that out of the six months for which recruiting is open so much time should have elapsed without any adequate response being made." At the end of August, instead of 6,000 being enrolled as a preliminary step in six battalions, only 3,803 had applied to be enrolled. In September, when the Hon. Mr. Sarma moved in Council that the period of applications for enrolment should be extended, the Commander-in-Chief said the final figures were 5,634 which, allowing for rejections, were as many recruits as could well be drilled. After some months the question of increasing the force might be reconsidered.

Conditions of Service.—The conditions under which Indians were invited to serve were those applying to His Majesty's Indian Forces in the Regular Army, and, as periodical training was not demanded of those enrolled, were far

less onerous than the terms imposed on Europeans in India. A further concession to Indian wishes was made in 1918 when it was announced that Indians might offer themselves for enlistment in any of six territorial L. D. F. units up to the total number of 6,200, after which Government would be prepared to consider a gradual augmentation of the establishment up to a maximum of 12,000. A Press-Note explained that "the Indian portion of the Indian Defence Force is to be of real value in the present emergency, it is very desirable that the six units above-named should be raised to the full establishment as soon as possible in order that immediate progress may be made with their training."

Act No. III of 1917.

[28th February 1917.]

An Act to constitute an Indian Defence Force and for other purposes.

Whereas it is necessary to constitute an Indian Defence Force, and compulsorily to enrol for service in that Force certain European British subjects; and

Whereas in the case of others, it is deemed sufficient for the present to take power to enrol for such service only such persons as may offer themselves for enrolment; it is hereby enacted as follows:—

Short title, extent and duration.

1. (1) This Act may be called the Indian Defence Force Act, 1917,

(2) It extends to the whole of British India, including British Baluchistan and the Sonthal Parganas, and applies also to European British subjects within the territori of any Native Prince or Chief in India.

(3) It shall remain in force during the continuance of the present war, and for a period of six months thereafter.

Definitions.

2. In this act, unless there is anything repugnant in the subject or context—

"European British subject," means a European British subject as defined in the Code of Criminal Procedure, 1898, and shall, for the purposes of this Act, be deemed to include every person who, before the third day of March, 1917, has filled up, signed and lodged Form A with the Registration Authority under the Registration Ordinance, 1917, and also every person who at the commencement of this Act is a member of a corps of volunteers constituted under the Indian Volunteers Act, 1869;

"Prescribed" means prescribed by rules made under this Act.

Obligation of general military service.

3. Every male European British subject who, on the first day of February 1917, was ordinarily resident in India or thereafter becomes so resident, and who for the time being has attained the age of eighteen years and has not attained the age of forty-one years and who is not within the exceptions set out in the Schedule to this Act, shall be deemed to be enrolled for general military service within the meaning of this Act:

Provided that, if any person referred to in this section whilst engaged in actual military employment of which fact the Commander-in-Chief in India shall be the sole judge, attains the age of forty-one years, such person shall continue to serve for such additional period not exceeding one year as the prescribed military authority may direct.

Obligation of local military service.

4. Every male European British subject who, on the first day of February, 1917, was ordinarily resident in India, or thereafter becomes so resident, and who for the time being has attained the age of forty-one years but has not attained the age of fifty years, and who is not within the exceptions set out in the Schedule to this Act, shall be deemed to be enrolled for local military service within the meaning of this Act.

Obligation of local military service and liability to military training.

5. Every male European British subject who, on the first day of February, 1917, was ordinarily resident in India, or thereafter becomes so resident, and for the time being has attained the age of sixteen years, but has not attained the age of eighteen years, shall be deemed to be enrolled for local military service but shall only be liable to such military training as may be provided for by regulations made under this Act, and shall not be liable to another form of military service.

Obligation on persons enrolled for military service.

6. Every person deemed to be enrolled for military service, whether local or general, shall, as from the commencement of this Act, be deemed to be enrolled in the Indian Defence Force and may be appointed to such corps or unit thereof as he may thereafter be assigned to, and shall, if he is a person deemed to be enrolled for general military service, be liable to serve in any part of India.

Obligation on persons enrolled for local military service.

7. Every person deemed to be enrolled for local military service shall be subject to any rules and regulations relating to that service which may be made under this Act:

Provided that no such rule or regulation shall require any such person to serve outside the limits of the prescribed local area.

Obligation on persons enrolled for general military service.

8. (1) Every person deemed to be enrolled for general military service shall be subject to any rules and regulations relating to that service which may be made under this Act.

(2) Every such person, when called out in the prescribed manner for general military service shall be subject to the provisions of the Army Act and any orders or regulations made thereunder, whereupon the said Act, orders and regulations shall apply to him as if the same were enacted in this Act, and as if such person held the same rank in the Army as he holds for the time being in the Indian Defence Force.

Determination of disputes as to residences and age.

9. If any question arises, with reference to this Act, whether any person is a European British subject within the meaning of this Act or is "ordinarily resident" in British India, or is within the exceptions set out in the Schedule or as to the age of any person, the prescribed authority, or a person authorized in this behalf in writing by that authority, shall apply to the District Magistrate or to an officer specially empowered in this behalf by the Local Government, in the district or local area in which the person to whom the dispute relates is for the time being, and such Magistrate or other officer after hearing such person or giving him a reasonable opportunity of being head, shall summarily determine the question, and the decision of such Magistrate or other officer shall be final for all the purposes of this Act:

Provided that if any question referred to in this section has been decided in accordance with the procedure provided in the Registration Ordinance, 1917, such decision shall be deemed to be a decision under this section of this Act.

Arrest of persons under obligation for military service.

10. If any person who is deemed to be enrolled for military service, whether local or general, disobeys any notice or order calling him out for such service, any District or Chief Presidenty Magistrate may, on the application of the prescribed authority, or of a person authorized in this behalf in writing by that authority, cause such person to be arrested and brought before him, and if the Magistrate is satisfied that he is a person to whom Sections 3, 4 or 5 of this Act applies, and who has been called out for such service, the Magistrate without prejudice to any penalty which such person may have incurred shall make over such person to the custody of the military authorities.

Certificate of exemption.

11. (1) Application may be made to the prescribed authority by, or (subject to rules made under this Act) in respect of, any person referred to in Sections 3, 4 or 5, for the issue to him of a certificate of exemption under the provisions of this Act on any of the following grounds, namely:—

(*a*) that it is expedient in the national interest that he should instead of being employed in military service be engaged in other work; or

(*b*) if he is being educated or trained for any work that it is expedient in the national interest that he should continue to be so educated or trained; or

(*c*) ill-health or infirmity;

and the prescribed authority, if it considers the grounds of the application established, shall grant such a certificate.

(2) The Governor-General in Council may also, by order in writing direct the issue to such persons or class of persons, as he thinks fit, of certificates of exemption if he is satisfied that such a course is desirable in the national interest.

(3) Any certificate of exemption may be absolute, conditional, or temporary, and may be renewed, varied or withdrawn at any time by the authority which granted it, and may provide that a person liable to general military service shall perform local military service:

Provided that every conditional or temporary certificate shall state the conditions under which or the period for which it is granted.

(4) If, for the purpose of obtaining exemption for himself or any other person, or for the purpose of obtaining the renewal, variation, or withdrawal of a certificate, any person makes a false statement or false representation, to any authority under this section, he shall be punishable with imprisonment for a term which may extend to six months, or with fine or with both.

Enrolment of persons other than European British subjects in the Indian Defence Force for general military service.

12. (1) The Governor-General in Council may, by notification in the "Gazette of India," constitute, in any local area which he may specify in the notification, corps or units for the enrolment in the Indian Defence Force of persons other than European British subjects, who satisfy the prescribed conditions and, within six months from the commencement of this Act, offer themselves for enrolment for general military service, and such persons may be enrolled accordingly in the prescribed manner.

(2) Every person enrolled in a corps or unit constituted under Sub-Section (1) shall be liable to serve in any part of India, shall be subject to all rules and regulations that may be made under this Act relating to his corps or unit, and shall not quit such corps or unit, except in the prescribed manner.

(3) Every such person shall, when called out in the prescribed manner for general military service, be subject to the Indian Army Act, 1911, and the rules made thereunder, whereupon the said Act and rules shall apply to him as if he held the same rank in the Indian Army as he holds for the time being in the Indian Defence Force.

Power to make rules.

13. (1) The Governor-General in Council may make rules to carry out the purposes of this Act.

(2) In particular and without prejudice to the generality of the foregoing power, such rules may—

(*a*) prescribe authorities for the purposes of Sections 9 and 10;

(*b*) constitute authorities and prescribe the procedure of such authorities for the purpose of considering applications for exemption from military service;

(*c*) prescribe the time within which, and the form in which, such application may be made, and the persons other than the person to be exempted by whom it may be made;

(*d*) prescribe the conditions subject to which persons other than European British subjects should be permitted to offer themselves for general military service;

(*e*) prescribe the military or other obligations to which persons or any class of persons enrolled or deemed to be enrolled under this Act shall

respectively be liable; constitute or specify Courts for the trial and punishment of breaches of such obligations; prescribe the procedure to be followed by such Courts; and provide for the enforcement or carrying out of the orders or sentences of such Courts;

(*f*) provide for the medical examination of persons liable to general military service;

(*g*) provide for the calling out and all purposes ancillary thereto of persons or any class of persons liable to general military service, and constitute authorities for the purpose of assisting in the selection of persons to be so called out; and

(*h*) provide for any matter in this Act directed to be prescribed.

(3) Rules made under this section may provide that any contravention thereof or of any order or notice issued under the authority of any such rules shall be punishable with imprisonment for a term which may extend to six months, or with fine or with both.

(4) All rules made under this Act shall be published in the "Gazette of India", and on such publication shall have effect as if enacted in this Act.

Summary and minor punishments.

14. (1) The Commander-in-Chief in India may, subject to the control of the Governor-General in Council, specify the summary and minor punishments for breach of any rule made under this Act to which persons enrolled or deemed to be enrolled under this Act shall be liable, without the intervention of a Court, and the officer or officers by whom and the extent to which such summary and minor punishments may be awarded.

(2) No punishment exceeding in severity imprisonment in military custody for a period of seven days shall be imposed as a summary punishment, and no punishment involving any kind of imprimsonment shall be imposed as a minor punishment.

Power to make regulations.

15. (1) The Commander-in-Chief in India may make regulations providing generally for all details connected with the organization, personnel, duties, and military training of any persons liable to military service or training under this Act.

(2) In particular and without prejudice to the generality of the foregoing power, such regulations may—

(*a*) specify the units, whether of regular troops or any other military force with which any person or class of persons enrolled or deemed to be enrolled under this Act shall serve or undergo military training, or constitute special military units for that purpose;

(*b*) specify the courses of training or instruction to be followed by any person or class of persons liable to military service or training under this Act; and

(*c*) provide for and regulate the remuneration, allowances, gratuities or compensation (if any) to be paid to any person or class of persons undergoing military service or training under this Act or to their dependants.

(3) Regulations made under this section may provide that any contravention thereof, or of any order or notice issued under the authority of any such regulation, shall be punishable with fine which may extend to five hundred rupees.

Act not to apply to persons confined in a prison or lunatic asylum.

16. Nothing in this Act shall apply to any person confined in a prison or lunatic asylum.

Power to disband corps or unit.

17. The Governor-General in Council may disband any corps or unit constituted under this Act.

Provisions of Registration Ordinance, 1917, continued in force.

18. The provisions of the Registration Ordinance, 1917, shall be in force during the continuance of this Act, and shall have effect as if they had been enacted in this Act:

Provided that the following amendments shall be made therein, namely:—

(1) In Section 3, Sub-Section (1), of the said Ordinance, for the words "had not attained the age of fifty years on the first day of February, 1917," the words "who for the time being has not attained the age of fifty years," shall be substituted.

(2) In Schedule II of the said Ordinance in entry (1) after the word "forces" the words "or of the Royal Indian Marine Service" shall be inserted, and in entry (2) for the word "British," the word "religious" shall be substituted.

THE SCHEDULE.

(SEE SECTIONS 3 AND 4.]

Exceptions.

(1) Members of His Majesty's naval and military forces of the Royal Indian Marine Service other than Volunteers enrolled under the Indian Volunteers' Act, 1869.

(2) Persons in Holy Orders or regular Ministers of any religious denomination.

(3) Persons who have at any time since the beginning of the war been prisoners of war, captured or interned by the enemy, or have been released or exchanged.

AMENDING BILLS.

During the autumn, 1918, session of the Imperial Legislative Council three Bills were officially introduced which contained amendments to the I. D. F. Act. The first made it possible **for men over 50 to volunteer** for service in the Defence Force. Some such provision had been contemplated in 1917 but it was not then thought worthwhile to legislate for the small number of men likely to be affected. Experience, however, showed that there was a good proportion of men in the Force who on attaining the age of 50 might wish to remain in it.

Territorial Limitations. The second Bill, known as the Indian Defence Bill, brought men under 41 more on equality with their fellow citizens in the United Kingdom who are

liable to service in any part of the world. It enlarged the scope of the military service imposed by the I. D. F. Act so as to make service out of India compulsory in the case of European British subjects in the General Service class (*i. e.*, between the ages of 18 and 41). This measure, said the Commander-in-Chief when introducing it, has the "advantage of considerably increasing the utility of the Indian Defence Force, for it is evident that military operations based on India might easily extend beyond its frontiers, and in such circumstances, the existing territorial limitations in regard to the employment of the force would prove highly inconvenient."

Industrial Compulsion Act.

Of greater importance, however than the two Bills just mentioned, was the Bill which sought to provide that persons deemed to be enrolled for military service under the I. D. F. Act might be called upon to perform war work. The bill was introduced and, after considerable criticism by two European members, postponed for six months. It is sufficiently explained in the statement of objects and reasons which states: Certain industries of national importance, which are essential to the maintenance of the forces in the field, are steadily expanding on a large scale necessitating the employment of men with special technical knowledge and training on a scale commensurate with such expansion. It is becoming increasingly difficult to obtain the services of specialist from the United Kingdom and it is proposed to utillise to the fullest extent the services of those who are in India. The Bill is designed to give effect to this proposal. Briefly the Bill provides for taking power, by an order in writing to require any member of the European portion of the Indian Defence Force, whether in possession of an exemption certificate or not, to take up or continue any employment in any industry declared to be of national importance by the Governor-General in Council. Persons in respect of whom such an order has been made will be deemed to have been called out for general military service or to have been called upon to perform actual military duty as the case may be, according as they belong to the general military service or local military service class. It is not intended to exercise this power except for the purposes of Government service and industrial concerns under Government control. It is proposed to make provision for the payment of reasonable salaries to persons employed on technical work and to utilise the services of the selection committees formed under the Indian Defence Force Act for advising the Government as regards individual cases.

ARMY.

The average strength of the European and Indian armies in India for 1916 (exclusive of Indian artificers and followers) was: European army 60,737 warrant and non-commissioned officers and privates; Indian army including those on duty in China and other stations outside India, excluding those under field service conditions, was 139,076.

The net expenditure on the army in 1917-18 was £24,540,100 for effective charges and £3,125,300 for non-effective charges.

The expenditure covered the full ordinary maintenance cost of the troops, &c., employed with the overseas Indian Expeditionary Forces, as, in accordance with parliamentary resolutions, Indian revenues continue to bear ordinary pay and other charges of these troops.

Health of the British and Indian Armies.—The following table shows the sickness and mortality of the British and Indian troops (excluding officers) in India. During 1915 the death-rate of the British troops in India showed a further rise over the rate for 1914, and over the rate for 1913, which was the lowest on record. There was a further rise in the admission rate. For the Indian troops both death-rate and admission rate show an increase. These increases are no doubt in large part due to the treatment in India of troops evacuated sick from Expeditionary Forces.

	Ratio per mille of strength.							
	British Troops.				Indian Troops.			
	Average 1908-12.	1913.	1914.	1915.	Average 1908-12.	1913.	1914.	1915.
Admissions into hospital.	638·4	580·5	614·1	823·1	578·3	531·7	566·5	744·4
Constantly sick ..	60·3	29·7	31·8	39·1	20·9	21·4	20·9	33·9
Deaths	6·1	3·3	4·3	5·95	5·4	4·0	4·2	8·55

MARINE.

The net expenditure on marine services in 1918-19 is estimated at £651,700, as against £435,600 in 1917-18. Provision is being made for the construction of the Marine Vessels which could not be proceeded with in 1917-18. This accounts for £132,800 of the increase, whilst an additional sum of £ 54,700 has been allowed for imported stores from home.

Expenditure on the Military Services.

	Accounts, 1915-16.	Accounts, 1916-17.	1917-18.		1918-19, Budget.
			Budget.	Revised.	
EXPENDITURE.	Rs.	Rs.	Rs.	Rs.	Rs.
INDIA—					
Effective Services—					
Administration ..	50,70,067	57,48,817	60,70,810	63,33,000	66,28,800
Military Accounts ..	25,20,017	26,20,842	26,03,440	27,35,000	27,38,050
Regimental Pay, etc.	7,99,57,421	7,72,27,057	7,70,22,420	8,02,64,000	8,29,91,860
Supply and Transport	2,47,25,419	2,91,17,776	3,20,03,000	3,39,94,000	3,48,04,080
Veterinary	1,74,025	1,72,784	1,73,610	1,80,000	1,70,240
Clothing	24,53,604	42,37,239	26,14,360	26,65,000	20,42,000
Remounts	45,99,756	44,62,466	45,77,480	57,68,000	43,83,680
Medical Services ..	28,06,736	30,12,527	32,64,970	32,26,000	31,66,310
Medical Stores ..	4,92,279	6,19,833	6,82,990	13,57,000	13,40,630
Ordnance	89,30,346	1,18,71,030	1,37,86,510	1,51,26,000	1,79,92,030
Ecclesiastical ..	3,75,208	3,96,759	3,78,190	3,99,000	4,03,700
Education	5,66,320	5,65,931	6,01,990	6,61,000	7,03,280
Compensation for Food, etc.	35,84,000	34,00,920	12,37,000	7,99,000	7,47,000
Miscellaneous Services	10,11,32,874	11,31,78,446	12,66,40,000	13,50,40,000	15,96,43,000
Indian Munitions Board.	....	55,019	....	21,15,000	21,86,280
Hutting	2,61,600	2,56,912	2,00,000	3,03,000	2,00,000
Conveyance by Road, River and Sea.	5,91,653	9,65,231	7,05,040	8,45,000	8,33,970
Conveyance by Rail..	58,83,294	1,09,80,704	1,04,99,570	1,26,88,000	1,20,00,000
Cantonments ..	14,06,228	17,37,917	19,35,620	20,67,000	12,08,090
Unadjusted Expenditure.	—12,49,349	—1,75,481	....	....	....
TOTAL RS. ..	24,42,81,498	27,04,52,729	28,49,97,000	30,65,65,000	33,41,83,000
Non-effective Services—Rs.	1,17,29,048	1,28,45,207	1,64,80,000	1,45,48,000	1,60,71,000
TOTAL INDIA RS. ..	25,60,10,546	28,32,97,936	30,14,77,000	32,11,13,000	35,02,54,000
Equivalent in sterling £ ..	17,067,369	18,886,529	20,098,500	21,407,600	23,350,300

	Accounts, 1915-16.	Accounts, 1916-17.	1917-18. Budget.	1917-18. Revised.	1918-19, Budget.
NGLAND—	£	£	£	£	£
Effective Services—					
Payments to War Office for British Forces.	929,251	930,700	930,700	930,700	930,700
Furlough Allowances, etc., of British Forces.	15,182	14,941	23,000	30,000	30,000
Consolidated Clothing Allowances of British Soldiers.	6,848	1	....	....	....
Furlough Allowances, Indian Service.	143,393	190,062	187,000	187,000	187,000
Indian Troop Service .	556,904	277,010	282,300	299,000	272,300
Other Heads	51,074	31,677	54,500	36,500	40,500
Clothing Stores ..	111,797	108,039	105,900	110,000	110,000
Ordnance and Miscellaneous Stores.	319,175	1,152,872	835,000	2,020,200	166,700
Medical Stores ..	104,511	182,705	141,800	120,000	161,700
Remount Stores ..	....	....	....	3,200	3,200
Supply and Transport Stores.	88,444	83,000	96,000	83,000	83,000
Mechanical Transport Stores.	....	1,65,439	158,800	158,800	160,000
Military Farms Stores	12,943	25,428	16,400	24,000	31,100
Operations in Persian Gulf (Stores).	....	....	....	....	....
Aviation Stores ..	60,000	....	169,000	100,000	203,300
North-West Frontier, 1914.	....	29,638	....	....	....
Stores taken to India with Troops.	8,315	....	....	....	....
TOTAL £ ..	2,407,837	3,191,512	3,000,400	4,102,400	2,379,500
Non-effective Service—					
Payments to War Office for British Forces.	864,473	676,073	600,000	680,400	576,100
Pensions, Indian Service.	1,301,993	1,236,154	1,230,000	1,190,000	1,170,000
Other Heads	251,528	269,735	287,000	285,000	315,000
TOTAL £ ..	2,417,994	2,181,962	2,117,000	2,155,400	2,061,100
TOTAL ENGLAND £ ..	4,825,831	5,373,474	5,117,400	6,257,800	4,440,600
TAL EXPENDITURE £ ..	21,893,200	24,260,003	25,215,900	27,665,400	27,790,900
RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.
India .. .. Rs.	90,00,890	1,17,70,562	1,02,35,000	1,24,33,000	1,29,01,000
	£	£	£	£	£
quivalent in sterling £	600,059	784,704	682,300	828,900	860,100
ngland .. .. £	339,884	330,814	304,000	282,300	284,000
TOTAL RECEIPTS £ ..	939,943	1,115,518	986,300	1,111,200	1,144,100
TAL NET EXPENDITURE £	20,953,257	23,144,485	24,229,600	26,554,200	26,646,800

* Established Strength of British and Indian Armies in British India (exclusive of Indian Artificers and Followers).

CORPS.	Northern Army.			Southern Army.			Total.		
	Commissioned Officers.	Warrant & Non-Commissioned Officers & Privates.	Total.	Commissioned Officers.	Warrant & Non-Commissioned Officers & Privates.	Total.	Commissioned Officers.	Warrant & Non-Commissioned Officers & Privates.	Total.
British Army.									
Royal Artillery ..	292	7,681	7,973	287	7,509	7,796	579	15,190	15,769
Cavalry	162	3,594	3,756	81	1,797	1,878	243	5,391	5,634
Royal Engineers .	204	9	213	105	6	111	309	15	324
Infantry ..	784	28,164	28,948	672	24,126	24,798	1,456	52,290	53,746
Invalid & Veteran Establishment.	..	..	..	..	..	..	..	..	..
Indian Army ..	71	..	71	30	..	30	101	..	101
General List, Infantry ..	..	..	..	..	..	..	..	..	..
General Officers unemployed ..	1	..	1	..	..	..	1	..	1
Total, British Army	1,514	39,448	40,962	1,175	33,438	34,613	2,689	72,886	75,575

CORPS.	British.		Indian.		British.		Indian.		British.		Indian.	
	Officers.	Warrant and N.-C. O.	Officers.	N.-C. O. and Men.	Officers.	Warrant and N.-C. O.	Officers.	N.-C. O. and Men.	Officers.	Warrant and N.-C. O.	Officers.	N.-C. O. and Men.
Indian Army.												
Artillery ..	57	..	6,440		11	..	3,603		68	..	10,043	
Body-Guards ..	4	..	280		4	..	142		8	..	422	
Cavalry	372	..	15,440		211	..	8,810		583	..	24,250	
Sappers & Miners	34	129	1,971		53	212	3,183		87	341	5,154	
Infantry ..	1,095	..	65,688		930	..	54,304		2,025	..	119,992	
Total, Indian Army	1,562	129	89,819		1,209	212	70,042		2,771	341	159,861	
Imperial Service Troops ..	..	..	9,077		..	..	11,992		..	..	21,069	
Indian Reservists — Artillery ..	..	..	1,363		..	..	565		..	..	1,928	
Indian Reservists — Cavalry ..	..	..	1,314		..	..	489		..	..	1,803	
Indian Reservists — Sappers & Miners ..	..	..	686		..	..	491		..	..	1,177	
Indian Reservists — Infantry...	..	..	19,380		..	..	11,836		..	..	31,216	
Volunteers—												
Efficients ..	818	17,799	..		731	20,122	..		1,549	37,921	..	
Reservists ..	19	1,521	..		12	1,533	..		31	3,054	..	

* Latest figures obtainable.

THE EAST INDIES SQUADRON.

Since 1903 a squadron of the Royal Navy, known as the East Indies Squadron, has been maintained in Indian waters. It has naturally varied in strength from time to time, and of late years in particular there have been several changes in its composition, the most recent being in the direction of strengthening it, owing to the disappearance of strength in the other squadrons of the Eastern Fleet. In 1903 the squadron consisted of one second class and three smaller cruisers and four sloops or gunboats. In 1906, when the policy of withdrawal from Eastern waters was inaugurated, it consisted of two second class and two third class cruisers, and remained at this strength until 1910: when one second class cruiser was withdrawn and two smaller vessels substituted, and three cruisers were lent from the Mediterranean to assist in the suppression of the arms traffic in the Gulf. By 1913 the position of the East Indies squadron had considerably improved. The battleship Swiftsure had taken the place of the second class cruiser which had been flagship, and a modern second class cruiser replaced the Perseus. This is apparently part of the scheme for constituting a Pacific Fleet of three "units," one unit being the Australian fleet which is ultimately to consist of 8 battle cruisers, 10 protected cruisers, 18 destroyers and 12 submarines, but up to the present it has completed, or nearly so, one battle cruiser, three others, six destroyers and three submarines. The other two "units" will be the squadrons stationed in China and Indian waters respectively.

The East Indies Squadron at the beginning of the war consisted of the following ships (later details are not published in the Navy List):—

Flagship: Swiftsure, battleship, 11,800 tons.

Commander-in-Chief, Rear-Admiral Gaunt.

Dartmouth, cruiser, 5,250 tons: Captain Judge D'Arcy.

Fox, cruiser, 4,050 tons: Captain F. W Caulfield.

Alert, sloop, 960 tons. Lieut. A. Johnstone.

Espiegle, sloop, 1,070 tons. Commander W. Nunn.

Odin, sloop, 1,070 tons: Commander C. R. Wason.

Contributions to the Navy.

A cock and bull story, to the effect that the Native Chiefs of India were going to present three super-Dreadnoughts and nine first class cruisers to the Imperial Navy, was started in November 1912, and directed public attention to the question whether India was paying an adequate amount for the services rendered by the Navy. Even the Naval Annual (1913 edition) took part in the agitation for an increased contribution by India. It says:—"Rumour has been persistent regarding the attitude of India towards the Navy. Some exaggerated statements were published during the year, but nothing definite has been done. This is the more surprising when it is remembered that, although the seaborne commerce of India totals 115 millions sterling, the annual contribution to the Navy is only £100,000 out of a total revenue of 82 millions sterling. It is true that very heavy expenditure is involved in the military forces of India, but the commerce, coast protection, and transporting of troops is dependent upon Britain's sea power. There is a prospect that India will voluntarily follow the example of the self-governing Dominions."

The proportion of contributions from the overseas Dominions towards naval expenditure is shown in the following table issued with the last Navy Estimates that gave details:—

Received from	Nature of Service.	Total.
		£
India ..	Maintenance of His Majesty's Ships in Indian Waters..	100,000
	Indian Troop Service (on account of work performed by the Admiralty)	3,400
	Repayment on account of services rendered by His Majesty's Ships engaged in the suppression of the Arms Traffic in the Persian Gulf	64,000
Australian Commonwealth Dominion of Canada.	Contributions on account of liability for Retired Pay of Officers and Pensions of Men lent from the Royal Navy.	10,800
Australian Commonwealth.	Survey of the N. W. Coast of Australia	7,500
Do.	Maintenance of an Australasian Squadron and of a branch of the Royal Navy Reserve..	41,600
Dominion of New Zealand	Maintenance of an Australasian Squadron and of the Imperial Navy generally, also of a branch of the Royal Naval Reserve	100,000
Union of South Africa ..	General maintenance of the Navy	85,000
Newfoundland ..	Maintenance of a branch of the Royal Naval Reserve ..	3,000
	Total ..	415,300

India's Marine Expenditure.

Since 1869 India has paid a contribution of varying amounts to the Imperial Government in consideration of services performed by the Royal Navy. Under existing arrangements, which date from 1896-7, the subsidy of £100,000 a year, is paid for the upkeep of certain ships of the East India Squadron, which may not be employed beyond prescribed limits, except with the consent of the Government of India. The chief heads of marine expenditure, which amounts to nearly £400,000 annually, are shown below. Charges and receipts in respect of pilotage are no longer brought to account under this head :—

	Accounts, 1915-16.	Accounts, 1916-17.	1917-18. Revised.	1918-19. Budget.
EXPENDITURE.				
India .. .. Rs.	72,07,696	40,85,438	49,29,000	52,53,000
Equivalent in sterling .. £	480,513	272,362	328,600	350,200
England .. .. £	265,000	421,318	408,000	610,100
Total .. £	745,513	693,680	736,600	960,300
RECEIPTS.				
India .. .. Rs.	33,48,942	54,75,072	45,15,000	46,29,000
Equivalent in sterling .. £	223,263	365,005	301,000	308,600
England .. .. £	....	22	....	....
Total .. £	223,263	365,027	301,000	308,600
NET EXPENDITURE . £	522,250	328,653	435,600	651,700

ROYAL INDIAN MARINE.

The Royal Indian Marine (The Sea Service under the Government of India) traces its origin so far back as 1612 when the East India Company stationed at Surat found that it was necessary to provide themselves with armed vessels to protect their commerce and settlements from the Dutch or Portuguese and from the pirates which infested the Indian coasts. The first two ships, the Dragon and Hoseander (or Osiander), were despatched from England in 1612 under a Captain Best, and since those days under slightly varying titles and of various strengths the Government in India have always maintained a sea service.

The periods and titles have been as follows:—

Hon. E. I. Co.'s Marine ..	1612—1686
Bombay „ ..	1686—1830
Indian Navy „ ..	1830—1863
Bombay Marine	1863—1877
H. M. Indian Marine	1877—1892
Royal Indian Marine ..	1892, Present day.

The Marine has always been most closely connected with Bombay, and in 1668 when the E. India Co. took over Bombay, Captain Young of the Marine was appointed Deputy Governor. From then until 1877 the Marine was under the Government of Bombay, and although from that date all the Marine Establishments were amalgamated into an Imperial Marine under the Government of India, Bombay has continued to be the headquarters and the official residence of the Director.

War Service of the Marine.

1612–1717 Continuous wars against Dutch, Portuguese and Pirates for supremacy of West Coast of India. 1744 War with France, capture of Chandernagore, and French ship Indienne. In 1756 Capture of Castle of Gheria; 1774 Mahratta War, capture of Tannah. Latter part of the eighteenth century, war with French and Dutch, Capture of Pondicherry, Trincomalee, Jafnapatam, Colombo, etc. 1801 Egyptian campaign under Sir Ralph Abercrombie. 1803 War with France. 1810 Taking of Mauritius and capture of French ship in Port Louis. Early part of the nineteenth century suppression of Jowasmi Pirates in the Persian Gulf. 1811 Conquest of Tara. 1813 Expedition against Sultan of Sambar. 1817-18 Mahratta War, capture of Forts at Severndroog. 1819 Expedition to exterminate piracy in the Persian Gulf. 1820 Capture of Mocha. 1821 Expedition against the Beni-koo-Ali Arabs. 1824-26 First Burma War. 1827 Blockade of Berbera and Somali Coast. 1835 Defeat of Beni Yas Pirater. 1838 Expedition to Afghanistan and capture of Karachi. 1838 Capture of Aden. 1840–42 War in China. 1843 Scinde War. Battle of Meanee, capture of Hyderabad. 1845–46 Maori war in New Zealand. 1848–49 War in Punjab, siege of Mooltan. 1852 Second Burma War, Capture of Rangoon, Martaban, Bassein, Prome and Pegu. 1855 Persian War, capture of Bushire, Muhammerah and Ahwaz. 1856–57 War in China. 1857–59 The Indian Mutiny. 1859 Capture of the Island of Beyt. 1860 China War, Canton, Taku Forts, Fatshan and Pekin. 1871 Abyssinian War. 1882 Egyptian Campaign. 1885 Egyptian Campaign. 1885 Third Burma War. 1889 Chin-Lshai Expedition. 1896 Suakin Expedition. 1897 Expedition to Imtirbe

Mombassa E. Africa. 1899–1902 S. African War. 1900–01 Boxer Rebellion in China, relief of Pekin. 1902–04 Somaliland Expedition.

Personnel, 1918.

OFFG. DIRECTOR.

Captain N. F. J. Wilson, C.M.G., C.B.E., R.I.M. Office Residence, Government Dock Yard, Bombay.

(The Director, R.I.M., advises the Government of India on all maritime matters.)

OFFG. DEPUTY DIRECTOR.

Capt. B. H. Jones, R.I.M.
Assistant Director (Administration), A. A. Whelan, Esqr.

CAPTAIN SUPERINTENDENT.

Captain M. W. Farewell, C.I.E., R.I.M.; Off. Residence, Marine House, Calcutta.

OFFICERS.

Commanders	33
Lieutenants and Sub-Lieutenants ..	72
Chief Engineers	10
Engineers and Assistant Engineers ..	75
Marine Survey	11

WARRANT OFFICERS.

Gunners	24
Clerks	21
Engine Drivers	2

PETTY OFFICERS AND MEN.

2,225 Recruited from the Ratnagiri District of the Bombay Presidency.

SHIPS.

Troopships ..	..R. I. M. S.	Dufferin*	..6315 tons	..	10,191	Horse Power.
,, ...	,,	Hardinge*	..5467 ,,	..	9,366	,,
,, ...	,,	Northbrook.*	5048 ,,	..	7,249	,,
Light-house Tender ..	,,	Nearchus	.. 491 ,,	..	753	,, Persian G.
Station Ship	,,	Dalhousie*	..1524 ,,	..	2,200	,,
,, ...	,,	Mayo	..1125 ,,	..	2,157	,, Rangoon.
Despatch Vessel ..	,,	Lawrence*	.. 903 ,,	..	1,277	,,
Special Service.. ..	,,	Minto*	.. 960 ,,	..	2,025	,,
Surveying Ship ..	,,	Investigator	.1014 ,,	..	1,500	,,
,, ...	,,	Palinurus	.. 299 ,,	..	486	,,
Station Ship	,,	Sunbeam	.. 334 ,,	..	70	,, Port Blair.
River Steamer.. ..	,,	Bhamo	.. 172 ,,	..	250	,, Burma.
,, ...	,,	Sladen	.. 270 ,,	..	360	,, ,,

* On Special Service.

In addition to the above are 39 launches composed of special service launches; target towing tugs, powder boats, military service launches, etc.

Dockyards.

There are two Royal Indian Marine Dockyards at Bombay and at Calcutta, the former being the more important. There are 5 graving docks and a wet basin at Bombay, together with factories which enables the whole of the repairs for the ships of the East India Squadron of the Royal Navy and for the ships of the Royal Indian Marine and local Governments to be carried out, and tugs, lightships, pilot schooners, launches, etc., constructed.

PRINCIPAL OFFICERS, BOMBAY DOCK YARD.

R. I. M. Officers.

Superintendent, Comdr. C. A. Scott, D.S.O., R.I.M.
Inspector of Machinery, Vacant.

CIVILIAN OFFICERS.

Chief Constructor, Mr. E. P. Newnham.
Constructor, Mr. W. J. Kenshett.

PRINCIPAL OFFICERS, CALCUTTA DOCKYARD.

R. I. M. Officers.

Staff Officer, Commander R. G. Strong, R.I.M.
Inspector of Machinery, Engr.: Capt. J. Lush, R.I.M.

CIVIL OFFICERS.

Constructor, Mr. D. H. North.

Appointments.

In addition to the regular appointments in the ships of the Royal Indian Marine, and in the R. I. M. Dockyards, the following appointments under local Governments are held by officers in the Royal Indian Marine :—

BOMBAY.

Port Officer, Assistant Port Officer, 1st Engineer and Shipwright Surveyor and 2nd and 3rd Engineers and Shipwright Surveyors to the Government of Bombay.

CALCUTTA.

Port Officer, Deputy Port Officer and Assistant Port Officer, 1st, 2nd and 3rd Engineers and Shipwright Surveyors to the Government of Bengal.

BURMA.

Principal Port Officer, Burma; First Assistant Port Officer, Rangoon. Engineer and Shipwright Surveyor to Government of Burma.

Assistant. Do. do. do. do.

Port Officer, Akyab, Moulmein and Bassein. Marine Transport Officer, Mandalay, and Superintending Engineer, Mandalay.

MADRAS.

Presidency Port Officer and Deputy Conservator of the Port.

CHITTAGONG.

Port Officer, and Engineer and Shipwright Surveyor.

ADEN.—Port Officer.

KARACHI.—Port Officer.

PORT BLAIR.—Engineer and Harbour Master.

Finance.

From time to time wise men have delivered themselves of lucubration on Indian finance, with special regard to the probable trend of events in time of crisis. The Indian finances have passed through the tremendous strain of four years of war; not a single one of these prognostications has come to pass: the whole course of Indian finance has been the precise converse of what was anticipated.

The main features of the Indian financial situation are comparatively simple. India is a poor country, though steadily rising in the scale of wealth. She has a considerable foreign debt, incurred for the construction of railways and irrigation works and held in London. She has to pay a substantial sum every year in pensions and leave allowances to the different services, and under these two heads has to remit to London every year approximately £ 22 millions sterling, which are called the Home Charges. Next, India has never been able to borrow within the country the money annually demanded for expenditure on reproductive works and has been dependent on the London market for the bulk of her capital requirements. The raising by loan of three millions sterling in India in a single year was regarded before the war as a remarkable achievement. The credit machinery of the country is badly organised and the mass of the people is illiterate; consequently although there is, managed by Government, a large Paper Currency, the population is largely dependent on the metallic rupee circulation, and as India produces no silver, the bullion necessary for the heavy coinage has to be purchased abroad. The rupee is unlimited legal tender in India and Government is under an obligation to provide sterling remittance for those who have to finance the foreign trade. For this purpose it maintains a large Gold Standard Reserve (q. v.) in London. It was always anticipated that in time of crisis there would be an immense demand for sterling remittance and a reduction of the Paper Currency.

Now let us glance at the course of events. So far from the Government having to meet an embarrassing demand for sterling remittance, after a brief interval following on the declaration of war the principal embarrassment has been the demand for rupees. It is hoped that the action of the United States Government in releasing three hundred and fifty million dollars held in their treasuries under the various Silver Acts for bullion purposes will provide India with an abundant supply indefinitely, although at the heavy price of a dollar an ounce. So far from the Paper Currency circulation having contracted, it has enormously expanded; from £ 42 millions in 1914, it has increased to £ 70 million in 1918. Small notes for one and two and a half rupees have been introduced with a considerable measure of success. The loan market in India has increased immensely. In 1913-14 the total borrowings were £ 4·7 millions, which was considered a good figure; in 1916-17 the Government raised in India itself £67 millions, whilst discharging £ 2 millions of debt in London. A new feature was introduced into the money market by the sale of Treasury Bills, and £ 30 millions were taken up in a few months. The small investor has been brought into the borrowing agency through the issue of postal cash certificates for sums as low as ten rupees, and through this agency £ 6½ millions were raised last year, or almost twice as much as the total borrowings of the Government in any pre-war year. The Imperial revenues last year were £ 22 millions more than during the pre-war year, of which £ 9½ millions are due to additional taxation and £ 12½ millions to additional revenue, two-fifths accruing from the increase in the profits on railways. In addition to financing an Imperial war expenditure in India of £ 128 millions during the 3½ years ended in March last, India has invested £ 67 millions in British Treasury Bills and proposes to invest an additional £ 16 millions in the current year.

The principal forces inducing these wholly unexpected conditions are the very heavy expenditure in India on account of the Home Government, amounting as we have seen to £ 128 millions. Secondly, the great balance of trade in favour of India. The demand for all varieties of Indian produce at high prices has effected a very large balance of trade in favour of India, which is fully discussed in the Trade Section (q. v.); the combined effects of these changes is immensely to increase the financial strength of India and to make the future a subject of abounding confidence.

Financial Characteristics.—Three important facts have to be borne in mind in considering the finances of India. The first is that the Budget of the Government of India includes also the transactions of the Local Governments, and that the revenues enjoyed by the latter are mainly derived from sources which they share with the Central Government. The principles underlying the relations of the supreme with the local governments are explained in the chapter dealing with this question. Generally speaking, certain heads of revenue are divided equally between the provinces and the Imperial Government, and certain heads are enjoyed entirely by the local governments. These vary with different provinces, but broadly it may be said that the divided heads are land revenue, excise, stamps, income-tax and the in-comings from the large irrigation works. The Provincial Governments take the whole of the receipts under forests and registration, and the income of the spending departments which they manage, such as ordinary public works, police, education, medical, courts and jails. The Government of India take the whole of the revenue accruing from the export of opium, salt, customs, mint, railways, posts and telegraphs, military receipts and tribute from Native States. As regards the expenditure, the Government of India are mainly responsible for the outlay relating to defence, railways, posts and telegraphs, interest on debt and home charges; and the provinces for charges connected with land revenue and general administration, forests, police, courts and jails, education and medical, whilst charges for irrigation and ordinary public works are common to both Im-

perial and Provincial. The second point is that a very large proportion of the revenue of the Government of India is derived not from taxation but from great State enterprises. It may be taken roughly that nearly two-thirds of the gross revenue is derived from sources other than taxation, such as the land revenue, opium, forests, tribute from Native States, posts and telegraphs, railways and irrigation. The third point is that the Secretary of State for India enters into very large financial transactions on behalf of the Indian Government in order to meet what are generically known as the Home Charges. These amount now to some eighteen millions sterling and are met by the Secretary of State selling for gold drafts in rupees on the Indian Treasuries known as the Council Bills or telegraphic transfers. These Home Charges were for many years erroneously described as a "drain" on India. A large proportion however goes to defray the interest on the sterling debt and the outlay on the purchase of stores and railway materials which cannot be acquired in India. The only part of the Home Charges which by any stretch of the imagination can be termed a "drain" is that which stands for civil and military officers on leave or pension, and here it is now recognised that India receives exceedingly good value for services rendered. One supplementary point which needs consideration is that the finances of India were artificially inflated for several years by the unusual opium receipts. The Government of India used to sell opium for export to China or the right of exporting opium to China and in view of the approaching end of this trade inflated prices were given for opium for export. This led to large windfall surpluses which for several years made the Government finances appear more prosperous than they really are.

Twelve Years' Finance.

We may now turn to the financial results of the last twelve years in pounds sterling.

—	Revenue.	Expenditure.	Surplus.
	£	£	£
1907-8 ..	71,900,000	70,700,000	300,000
1908-9 ..	69,800,000	73,500,000	*3,700,000
1909-10 ..	74,600,000	74,000,000	600,000
1910-11 ..	80,300,000	76,900,000	3,400,000
1911-12 ..	82,835,750	78,895,416	3,940,334
1912-13 ..	86,985,300	83,623,400	3,361,900
1913-14 ..	84,262,000	83,675,000	587,000
1914-15 ..	80,156,000	85,115,000	*4,959,000
1915-16 ..	82,620,000	85,204,000	*2,644,000
1916-17 ..	96,834,900	91,017,000	5,817,500
1917-18 ..	110,401,000	102,320,000	8,081,000
1918-19 ..	108,347,000	106,151,000	2,196,000

* Deficit.

Provincial and Imperial—At this stage one point should be made clear. Study of the figures often reveals a baffling discrepancy between "Imperial" and "Imperial"-cum-Provincial balances. This arises from the intermingling of Provincial with Imperial finance. During the halcyon years when large surpluses accrued to the treasury from the opium surpluses and the general prosperity of the country, the Government did not reduce taxation, but devoted these surpluses in part to the extinction of floating debt and the avoidance of further debt by financing public works from revenue and in part to large grants to the Local Governments for ameliorative works, chiefly in improving education and sanitation. But the spending of this money involved long preparation, with the result that the Local Government accumulated very large balances in excess of the normal. Further, owing to the establishment of a regime of strict official economy, the Provinces have expanded their balances out of current revenues.

First War Budget.—These factors reflected in the Budget of 1914-15—the Indian financial year closes on March 31st—produced a deficit of £4,959,000. The most rigid economy failed to balance the Budget estimates for 1915-16 by £3,833,000. The Government had therefore to decide whether they would meet the actual and prospective deficits by borrowing or by the imposition of fresh taxation. They speculated on the assumption that the war would be over before the close of the year, and decided to meet the deficits by temporary and permanent borrowing. For this they had justification. In the past, it has been the practice of the Government of India to use their surpluses largely for the avoidance of debt for the construction of reproductive works, and at the same time to meet any deficit not by temporary borrowing, but by additional taxation; it was therefore only an act of justice to meet what was expected to be a temporary war deficit by borrowing. Government therefore proposed to continue the loan of £7 millions from the Gold Standard Reserve, to renew the £7 millions of floating debt in London, to borrow £3 millions in India and £6½ millions in London. In these ways they expected to maintain a fair scale of expenditure and a reasonable outlay on reproductive works without recourse to fresh taxation.

Second War Budget.—The Budget of 1915-16 having been based on the assumption that the war would be over before the close of the financial year, it was obvious that fresh taxation would be necessary to meet the conditions arising out of the prolongation of hostilities. Moreover there were certain adverse circumstances in the year. The monsoon rains were not good. The Customs revenue showed a certain decline. The railway receipts were good; this has now become an important head in the Indian Budget, whereas in past years the railways did not pay interest charges; the larger revenue arose in part from a brisk internal trade and in part from the substitution of rail-borne for sea-borne coal from Bengal to the chief consuming centres. The borrowing programme was interrupted. In the Budget, the Secretary of State calculated on borrowing £6½ millions; in practice he raised only £3·1 millions. Rigid economy was exercised in the

capital programme; for instance the railway budget was reduced from £8 millions to £4·9 millions, and the expenditure on irrigation was cut down from £1·1 million to £·9 million. The military expenditure was also much heavier than was anticipated. Whilst therefore the budgetted revenue rose from £ 80·4 millions to £82·62 millions and the expenditure from £84·435 millions to £85·264 millions, the **deficit was £2·644 millions**. On a cautious estimate of revenue and expenditure with the existing scale of taxation the close of the financial year 1916-17—March 31st, 1917—would have found the State with a further deficit of £2·96 millions. Reference has been made to the fact that in India in time of crisis the State is a lender rather than a borrower; also to the fact that there was a large temporary debt—£7 millions in London and a like sum in India. It was therefore of the first importance to impose new taxation and to discharge as much temporary debt as possible.

The New Taxes.—The new taxes took the general form of an addition to the tariff. It is explained in the section on Customs (*q. v.*) that the Indian tariff is one for revenue purposes, that it is based on a general import duty of five per cent. with a special tariff of three and a half per cent. on cotton piece-goods and a large free list. The Budget raised the general tariff to seven and a half per cent., except in the case of sugar, which was raised to ten per cent. The free list was also reduced and special tariffs arranged for wines and spirits and tobacco. To this general rule, however, one important exception was made: the import duty on piece-goods stood at the old figure of three and a half per cent. These additions were estimated to produce £410,000. Export duties were also imposed on two flourishing staples, tea to the extent of Rs. 1-8-0 per 100 lbs., raw jute Rs. 2-4-0 per bale of 400 lbs., equivalent to five per cent., and in the case of manufactured jute Rs. 10 per ton on sacking and Rs. 16 per ton on Hessians. The whole yield from the revision of the tariff was put at £2·1 millions. The salt tax had been steadily reduced from Rs. 2-8-0 per maund of 82 lbs. to Re. 1; as this has always been reckoned a war tax, an addition of four annas a maund to the duty was made, estimated to yield £600,000. The income-tax was also revised and further graduated. Under the old schedule incomes of Rs. 1,000 and under were exempt. Incomes above that figure paid either four or five pies in the rupee; roughly speaking the income-tax may be taken as five pies in the rupee or six pence in the pound. The new proposals left all incomes of Rs. 5,000 and under untouched. Incomes of Rs. 5,000 to Rs. 9,999 were charged six pies or seven pence halfpenny in the pound; incomes of Rs. 10,000 to Rs. 24,999, nine pies in the rupee or elevenpence farthing in the pound; and incomes of Rs. 25,000 and upwards one anna in the rupee or one and three pence in the pound. Profits on companies were charged the anna rate.

Financial Effect.—To sum up the financial effect of the proposals above explained, Government aimed at an additional revenue of—

(*a*) £2,150,000 from Customs and consequential changes in the excise duties on liquors.

(*b*) £600,000 by an enhancement of the duty on Salt.

(*c*) £900,000 by an increase under Income Tax.

Or in all a little over £3·6 millions as against an estimated imperial deficit of £2·6 millions. This left an Imperial surplus of £1,052,000 which, though somewhat less than aimed at in the years just preceding the war, supplied a useful and much needed source of strength against contingencies.

Third War Budget.—The second war budget anticipated a revenue of £ 86·5 millions—an expenditure of £ 86 millions, leaving a surplus of £·473 million; the revenue actually received was £ 96·7 millions, the expenditure was £89·4 millions, leaving a surplus of £ 7·2 millions. The agricultural year was an exceptionally good one; despite the inevitable restrictions on trade, there was a considerable recovery; and these conditions were reflected in the revenue. Nearly half the expansion was due to a phenomenal increase of over £4 millions from railways. The more favourable trade and economic conditions, coupled with the removal of competition from the coastwise traffic, caused the railway receipts to attain an unprecedented figure. The new taxes imposed in the Budget were estimated to yield £ 3·6 millions; the actual yield was £ 1,200,000, more of which £ 200,000, occurred under salt, £ 650,000, under customs, and £350,000, under income tax. The greater part of the increased expenditure was under military charges. On capital account it was estimated that there would be an expenditure of £ 6·6 millions, including £ 2 millions for the discharge of debt; the capital expenditure was £ 15·8 millions, mainly due to increasing the discharge of debt from £ 2 millions to £ 11·6 millions. The Budget for 1917–18 provided for a revenue of £ 98·8 millions, an expenditure of £ 98·819 millions, leaving a surplus of £ ·032 million. To appreciate these figures we must turn to what was the dominating feature of the Third War Budget namely India's contribution to the War.

India's contribution to the war—The Finance Member explained that the Government of India had been taken to task for not contributing more liberally to the cost of the war. Section 22 of the Government of India Act forbids the application of the revenues of India, to defraying the expenses of any military operations carried on beyond her external frontiers, otherwise than for repelling or preventing actual invasion, without the specific approval of both Houses of Parliament. By special resolution of Parliament India had paid the ordinary charges of the troops employed out of India, and up to the end of the year India has contributed in this manner a sum of £ 11¼ millions, to which would be added in the ordinary course of the year 1917–18 a sum of £ 4 millions. But the Government of India had always felt that if their circumstances warranted it they should take up the question of making a further direct contribution towards the struggle and at the beginning of January the Viceroy addressed the Secretary of State a telegram offering to accept an ultimate total special contribution of £ 100 millions to the war. This would involve an annual payment of £ 6 millions in interest and sinking fund charges. On the existing basis of taxation the Budget was estimated to produce a surplus of

£2½ millions; but it was necessary to provide £ 3 millions for interest and sinking fund charges, so another £ 3 millions would have to be raised by taxation.

The new Taxes.—The natural manner of raising the bulk of this additional sum was the imposition of an excess profits tax; but this was put aside, both because of the absence of the necessary administrative machinery, and because the charge was a permanent one, which would continue after the excess profits due to the war had ceased to operate. It was therefore proposed to establish a super-tax. The rate of income tax established in the Budget of 1916–17 ran on a graduated scale of four pies in the rupee to one anna, which last sum was made payable on incomes of Rs. 25,000, and over. The ordinary rate of income tax was maintained. In explaining his proposals in detail the Finance Member said:—

"The super-tax will begin in respect of income exceeding Rs. 50,000 and will then be levied in an ascending scale as shown below:—

For every rupee of the first Rs. 50,000 of the excess, *i.e.*, between Rs. 50,000 and 1 lakh. 1 anna per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between Rs. 1 and 1½ lakhs. 1½ annas per rupee.

For every rupee of the next Rs. 50,000 of the excesss, *i.e.*, between Rs. 1½ and 2 lakhs. 2 annas per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between Rs. 2 and 2½ lakhs. 2½ annas per rupee.

For every rupee of remainder of the excess, *i.e.*, on everything over Rs. 2½ lakhs. 3annas per rupee.

"These rates will be in addition to the one anna income tax, so that a person possessing an income exceeding. Rs. 2½ lakhs will pay in all a rate of 4 annas per rupee (equivalent to 5*s* in the pound) on that excess; while as regards each half lakh making up the first Rs. 2½ lakhs he will pay rates varying from 1 anna (*i.e.*, ordinary income tax alone) on the first to 3½ annas on the last. He is still favourably situated as compared with the wealthy taxpayer in England whose ordinary income tax would reach 5*s*. in the pound, while the super-tax might extend to anything up to 3*s*. 6*d*.

"The materials for an estimate of the probable yield of the super-tax are not as adequate as we should have wished owing to the fact that under the existing Act the profits of companies and interest on securities are assessed to income-tax at the source without reference to their ultimate destination, so that we have no particulars of their distribution between people who will in future be liable to the super-tax and those who will not be liable. On such information, however, as we can obtain we take the probable yield at £ 1,350,000.

"The next source from which we propose to raise revenue is the export tax on jute. This was imposed in the current year at the rate of Rs. 2-4-0 per bale of 400 lbs. in the case of raw jute, with a special rate of 10 annas per bale on cuttings; and as regards manufactured jute at Rs. 10 per ton on 'sackings' and Rs. 16 on 'hessians.' Having regard to India's monopolist position in respect of jute production, which enables taxation to be normally passed on to the consumer, we propose to double the rates abovementioned and thus to obtain an additional revenue of £ 500,000.

"The taxation already described will yield us in all £ 1,850,000. The way in which we propose to make the bulk of the remaining provision required is one which will, I think, be received with satisfaction in this Council and in the country generally, while the incidence of the tax will be of much more general application than that of the imposts above described. It will be remembered that in introducing the Financial Statement for the current year, I said that we had been anxious to raise the duty on imported cotton goods, while leaving the cotton excise duty, which has formed the subject of such widespread criticism in this country, unenhanced, subject to the possibility of its being altogether abolished when financial circumstances are more favourable. But His Majesty's Government held that in the then circumstances such a course would be undesirable, and decided to leave the cotton duties question to be considered later on 'in connection with the general fiscal policy which may be thought best for the Empire and the share, military and financial, that has been taken by India in the present struggle'. To-day I am able to announce that in view of the taxation required to make our war contribution worthy of India and of the place we desire her to hold in the Empire, His Majesty's Government have now given their consent to our raising the import duty on cotton goods from 3½ per cent. as it now is, to 7½ per cent, which is our present general tariff rate. The cotton excise duty will remain at 3½ per cent. There can be no question of our doing away with an impost which is estimated to produce about £ 320,000 next year at a time when we have to impose extra taxation. By this means we estimate that we can get an additional £1 million. I am sure that the action of His Majesty's Government, following as it does on their recent association of India with the special Imperial Conference called in connection with the war and the measures to be taken thereafter, will meet with the greatest appreciation in India.

"Finally, we have decided to impose, as a war measure, a surcharge on railway goods traffic at the rate of one pie a maund on coal, coke and firewood and two pies a maund on other articles. We have advisedly taken a low uniform rate so as to avoid, as far as possible, the necessity for special adjustments in regard to short distances or particular classes of traffic. Some details in respect of this taxation are still under consideration, but the action necessary in connection with its imposition will be taken as soon as possible. The yield is estimated approximately at £½ million, and we thus obtain the amount that we require to finance our War contribution, and leave ourselves with a surplus £130,000, which is little enough having regard to the circumstances of the time."

The New Loan:—It was desirable, from every point of view, that as large a portion of the India share in the cost of the war of £100 millions as possible should be discharged from borrowings in India. It has been pointed out that one source of embarrassment to the Indian finances was the very large sums spent in India on account of the Home Government. It was

necessary to raise a very large capital sum in order to meet these expenses. Next the interest and sinking fund charges will amount to £ 6 millions sterling a year; it was desirable that these should be distributed in India instead of being remitted to London. But the scope of the Indian market is limited; it was considered phenomenal when a sum of Rs. 7½ crores or about £ 5 millions was raised in India in one year; it was obvious then that the loan would have to be of a special character. In summarising his proposals under this head the Finance Member said:—

"The first option which we offer to the public is a long term loan issued at Rs.95, with interest at 5 per cent; redeemable from 1929 onwards and in any case not later than 1947; supported by a special sinking fund; and carrying conversion rights in respect of all our existing long-term issues. That is the offer we make to the man who desires a semi-permanent investment.

"We feel, however, that this will not do for the banks and financial houses, as well as many others who are willing to make a great effort in support of the War Loan but cannot, in justice to themselves, afford to lock up their money for an indefinite period. Indeed for such persons even a five-year period may be too long. What we want to get is a maximum response, and we wish therefore to meet every requirement. We propose, therefore, also to issue short-term bonds, with three or five years' currency at the option of the purchaser and carrying a very attractive rate of interest. We originally proposed to fix this at 6 per cent. with liability to income-tax, but on expert advice as to the importance attached to freedom from income-tax present and future, we have decided to adopt an income-tax free rate of 5½ per cent. But—and here we follow the precedent set by the Home Government in respect of their *ex*-income-tax borrowing—we do not extend this exemption to super-tax.

"We are also adopting a further method, which is intended to be a permanent measure, to bring the Government into relation with investors of a smaller class than it has hitherto reached, and which will have no time limit in respect of contributions thereby receivable.

It is proposed, with effect from 1st April, that small Government bonds or certificates of the eventual value, after five years, of Rs. 10, 20, 50, and 100 shall be constantly on sale at post offices, and that the amounts for which they can be purchased shall be so fixed that the amount repaid at the end of five years, that is the full face value of the certificate, shall represent a return of about 5½ per cent. compound interest. Thus, a Rs. 10 certificate will be purchasable for Rs. 7-12-0, a Rs. 20 certificate for Rs. 15-8-0, a Rs. 50 certificate for Rs. 38-12-0, and a Rs. 100 one for Rs. 77-8-0.

The following specimens table for a Rs. 10 bond shows how this system will work out as regards whole years, and the gradual increase in value of the original investment.

	Rs.	A.	P.
Amount paid on purchase	7	12	0
Due at the end of 1st year	8	1	0
,, 2nd ,, ...	8	7	0
,, 3rd ,, ...	8	14	0
,, 4th ,, ...	9	6	0
,, 5th ,, ...	10	0	0

"The amounts paid on these certificates wi be free of income-tax, and the certificates wi be kept, if the holder so desires, in the custod of the Postal Accountant General."

Reception of the Budget:—The Budget wa accorded a very wide measure of popular appr val. The contribution to the war was regarde as large, larger than most Indian publicist had expected; nevertheless it was unanimousl approved. The distribution of the cost of th contribution was also generally approved. Th terms of the new loan were warmly approve and an active campaign was set afoot throughout the country in order to make it a succes A feature of the subscriptions was the larg amount forth-coming from small investo through the purchase of cash certificates, an the large subscriptions from joint stoc companies, chiefly in the form of three year wa bonds. The total amount of the subscriptio was Rs. 47 crores, which although it may seem small in comparison with the gigantic sum raised in Europe and America, is an immens sum for India.

Fourth War Budget.—The fourth wa budget presented fewer features of special in terest, and it contained no surprises, save th pleasant one that when everyone was expec ting an increase in taxation none was foun necessary. As is shown above, the estimate revenue was £98·8 millions; it amounted t £110.4: the estimated expenditure was £98. millions; it amounted to £102.3: the estimate surplus was £.038 million: it amounted t £8 millions. With this substantial sum i hand the Finance Member found himsel able to meet the whole of his estimated revenu expenditure without imposing any additiona taxation. The principal contributories to th increased revenue were railways, salt, income tax, and customs; the larger expenditure wa almost entirely on military expenses. The chie feature in the financial history of the year wa in the section of the Budget which is called Ways and Means, and which deals with the capital account. The ordinary transactions under this head are between twenty and thirty millions sterling; owing to the very heavy expenditure in India on account of the Home Government they amounted in the past year to £ 111 millions. This tremendous sum, for India, was met by the proceeds of the war loan £36½ millions; revenue £31½ millions; Treasury Bills £30 millions; coinage £ 13 millions; and investments in London on behalf of the Paper Currency Reserve £ 8.7 millions. The Ways and Means section also constitutes the principal problem of the Budget of 1918-19. The sum which has to be met is put down at £78 millions, which it is proposed to meet as to £ 22·1 from revenue; £20 from borrowing in India; £13 in specie for coinage; £16 from further investments on behalf of the Paper Currency Reserve; and £ 5 millions from balances. The details of the new loan were not announced in the Budget and are dealt with separately in the section India and the War (q. v).

The details of the budget are set out in the following table. As the manner in which the great heads of income like land revenue, railways, irrigation and customs are realised is described in separate articles (*q. v.*) they need not detain us here:—

	Accounts, 1916-1917.	Revised Estimate, 1917-1918.	Budget Estimate, 1918-1919.
REVENUE.			
Principal Heads of Revenue—	£	£	£
Land Revenue	22,041,265	22,191,100	22,358,500
Opium	3,160,005	3,068,500	3,191,800
Salt	4,826,260	5,432,800	3,492,200
Stamps	5,776,696	5,745,000	5,928,000
Excise	9,215,899	10,050,100	10,373,700
Customs	8,659,182	11,127,900	10,714,400
Income Tax	3,772,967	6,075,800	6,313,200
Other Heads	3,655,196	3,861,300	3,870,700
TOTAL PRINCIPAL HEADS	61,107,470	67,552,500	66,242,500
Interest	1,136,504	2,245,300	3,552,600
Posts and Telegraphs	4,174,607	4,492,100	4,782,800
Mint	689,866	530,700	376,000
Receipts by Civil Departments	1,739,713	1,920,100	1,956,100
Miscellaneous	847,530	2,599,900	1,295,200
Railways: Net Receipts	21,313,797	24,051,600	22,983,700
Irrigation	5,155,624	5,188,000	5,320,400
Other Public Works	309,373	318,900	304,900
Military Receipts	1,575,946	1,502,200	1,532,700
TOTAL REVENUE	98,050,430	110,401,300	108,346,900
EXPENDITURE.			
Direct Demands on the Revenues	9,328,668	9,919,000	10,438,300
Interest	1,174,864	7,797,500	7,784,300
Posts and Telegraphs	3,441,387	3,599,000	3,931,400
Mint	167,411	179,800	170,000
Salaries and Expenses of Civil Departments	19,081,230	20,915,100	22,993,000
Miscellaneous Civil Charges	5,414,272	5,894,800	5,614,700
Famine Relief and Insurance	1,000,000	1,000,000	1,000,000
Railways: Interest and Miscellaneous Charges	13,831,922	13,876,800	13,782,000
Irrigation	3,549,912	3,742,800	3,928,700
Other Public Works	4,618,535	5,110,500	5,945,600
Military Services	26,566,757	30,284,700	30,532,700
TOTAL EXPENDITURE, IMPERIAL AND PROVINCIAL	88,174,958	102,320,000	106,150,700
Add—Provincial Surpluses, that is, portion of allotments to Provincial Governments not spent by them in the year.	2,397,302	2,322,900	351,400
Deduct—Provincial Deficits, that is, portion of Provincial Expenditure defrayed from Provincial Balances	....	66,700	446,700
TOTAL EXPENDITURE CHARGED TO REVENUE.	90,572,260	104,576,200	106,055,400
SURPLUS	7,478,170	5,825,100	2,291,500
TOTAL	98,050,430	110,401,300	108,346,900

THE LAND REVENUE.

The principle underlying the Land Revenue system in India has operated from time immemorial. It may be roughly formulated thus—the Government is the supreme landlord and the revenue derived from the land is equivalent to rent. On strictly theoretical grounds, exception may be taken to this statement of the case. It serves, however, as a substantially correct description of the relation between the Government and the cultivator. The former gives protection and legal security. The latter pays for it according to the value of his holding. The official term for the method by which the Land Revenue is determined is "Settlement." There are two kinds of settlement in India—Permanent and Temporary. Under the former the amount of revenue has been fixed in perpetuity, and is payable by the landlord as distinguished from the actual cultivator. The Permanent Settlement was introduced into India by Lord Cornwallis at the close of the eighteenth century. It had the effect intended of converting a number of large revenue farmers in Bengal into landlords occupying a similar status to that of landowners in Europe. The actual cultivators became the tenants of the landlords. While the latter became solely responsible for the payment of the revenue, the former lost the advantage of holding from the State. This system has prevailed in Bengal since 1795 and in the greater part of Oudh since 1859. It also obtains in certain districts of Madras.

Temporary Settlements.

Elsewhere the system of Temporary Settlements is in operation. At intervals of thirty years, more or less, the land in a given district is subjected to a thorough economic survey, on the basis of the trigonometrical and topographic surveys carried out by the Survey Department of the Government of India. Each village area, wherever the Temporary Settlement is in vogue, has been carefully mapped, property-boundaries accurately delineated, and records of rights made and preserved. Under the Permanent Settlement in Bengal the occupant does not enjoy these advantages. The duty of assessing the revenue of a district is entrusted to Settlement Officers, members of the Indian Civil Service specially delegated for this work. The duties of a Settlement Officer are thus described in Strachey's *India* (revised edition, 1911):—"He has to determine the amount of the Government demand, and to make a record of all existing rights and responsibilities in the land. He has a staff of experienced subordinates, almost all of whom are natives of the country, and the settlement of the district assigned to him is a work which formerly required several years of constant work. The establishment of agricultural departments and other reforms have however led to much simplification of the Settlement Officer's proceedings, and to much greater rapidity in the completion of the Settlements. All the work of the settlement officer is liable to the supervision of superior officers, the assessments proposed by him require the sanction of the Government before they become finally binding; and his judicial decisions may be reviewed by the Civil Courts. It is the duty of the settlement officer to make a record of every right which may form the subject of future dispute, whether affecting the interest of the State or of the people. The intention is to alter nothing, but to maintain and place on record that which exists."

The Two Tenures.

Under the Temporary Settlement land tenures fall into two classes—peasant-holdings and landlord-holdings, or *Ryotwari* and *Zemindari* tenures. Broadly speaking, the difference between the two in a fiscal sense is that in Ryotwari tracts the *ryot* or cultivator pays the revenue direct; in *Zemindari* tracts the landlord pays on a rental assessment. In the case of the former, however, there are two kinds of *Ryotwari* holdings—those in which each individual occupant holds directly from Government, and those in which the land is held by village communities, the heads of the village being responsible for the payment of revenue on the whole village area. This latter system prevails in the North. In Madras, Bombay, Burma and Assam, ryotwari tenure is on an individual basis, and the Government enters into a separate agreement with every single occupant. The basis of assessment of all classes of holdings is now more favourable to the cultivator than it used to be. Formerly what was believed to be a fair average sum was levied on the anticipated yield of the land during the ensuing period of settlement. Now the actual yield at the time of assessment alone is considered, so that the cultivator gets the whole of the benefit of improvements in his holding subsequently brought about either by his own enterprise or by "unearned increment." The Government, however, may at a new settlement re-classify a holding so as to secure for itself a fair share in an increment that may have resulted from public works in the vicinity, such as canals and railways, or from a general enhancement of values. But the principle that improvements effected by private enterprise shall be exempt from assessment is now accepted by the Government and provided for in definite rules.

Incidence of the Revenue.

The incidence of the revenue charges varies according to the nature of the settlement, the class of tenure, and the character and circumstances of the holding. Under the Permanent Settlement in Bengal Government derive rather less than £3,000,000 from a total rental estimated at £12,000,000. Under Temporary Settlements, 50 per cent. of the rental in the case of *Zemindari* land may be regarded as virtually a maximum demand. In some parts the impost falls as low as 35 and even 25 per cent. and only rarely is the proportion of one-half the rental exceeded. In regard to *Ryotwari* tracts it is impossible to give any figure that would be generally representative of the Government's share. But one-fifth of the gross produce is the extreme limit, below which the incidence of the revenue charge varies greatly. About sixteen years ago the Government of India were invited in an influentially signed memorial to fix one-fifth of the gross produce as the maximum Government

demand. In reply to this memorial and other representations the Government of India (Lord Curzon being Viceroy) issued a Resolution in defence of their Land Revenue Policy. In it it was stated that "under the existing practice the Government is already taking much less in revenue than it is now invited to exact" and "the average rate is everywhere on the down grade." This Resolution, together with the statements of Provincial Governments on which it was based, was published as a volume; it is still the authoritative exposition of the principles controlling the Land Revenue Policy of the Government of India. In a series of propositions claimed to be established by this Resolution the following points are noted:—(1) In *Zemindari* tracts progressive moderation is the key-note of the Government's policy, and the standard of 50 per cent. of the assets is more often departed from on the side of deficiency than excess; (2) in the same areas the State does not hesitate to interfere by legislation to protect the interests of the tenants against oppression at the hands of the landlords; (3) in *Ryotwari* tracts the policy of long-term settlements is being extended, and the proceedings in connection with new settlements simplified and cheapened; (4) local-taxation (of land) as a whole is neither immoderate nor burdensome; (5) over-assessment is not, as alleged, a general or widespread source of poverty, and it cannot fairly be regarded as a contributory cause of famine. At the same time the Government laid down as principles for future guidance—(*a*) large enhancements of revenue, when they occur, to be imposed progressively and gradually, and not *per saltum*; (*b*) greater elasticity in revenue collection, suspensions and remissions being allowed according to seasonal variations and the circumstances of the people; (*c*) a more general resort to reduction of assessments in cases of local deterioration.

Protection of the Tenants.

In regard to the second of the five propositions noted above, various Acts have been passed from time to time to protect the interests of tenants against landlords, and also to give greater security to the latter in possession of their holdings. The Oudh Tenancy Act of 1886 placed important checks on enhancement of rent and eviction, and in 1900 an Act was passed enabling a landowner to entail the whole or a portion of his estate, and to place it beyond the danger of alienation by his heirs. The Punjab Land Alienation Act, passed at the instance of Lord Curzon, embodied the principle that it is the duty of a Government which derives such considerable proportion of its revenue from the land, to interfere in the interests of the cultivating classes. This Act greatly restricted the credit of the cultivator by prohibiting the alienation of his land in payment of debt. It had the effect of arresting the process by which the Punjab peasantry were becoming the economic serfs of money-lenders. A good deal of legislation affecting land tenure has been passed from time to time in other provinces, and it has been called for more than once in Bengal, where under the Permanent Settlement (in the words of the Resolution quoted above), "so far from being generously treated by the Zemindars, the Bengal cultivator was rackrented, impoverished, and oppressed."

Government and Cultivator.

While the Government thus interferes between landlord and tenant in the interests of the latter, its own attitude towards the cultivator is one of generosity. Mention has already been made of the great advantage to the agricultural classes generally of the elaborate systems of Land Survey and Records of Rights carried out and maintained by Government. In the Administration Report of Bombay for 1911-12, it is stated:—"The Survey Department has cost the State from first to last many lakhs of rupees. But the outlay has been repaid over and over again. The extensions of cultivation which have occurred (by allowing cultivators to abandon unprofitable lands) have thus been profitable to the State no less than to the individual: whereas under a *Zemindari* or kindred system the State would have gained nothing, however much cultivation had extended throughout the whole of 30 years' leases." On the other hand, the system is of advantage to the *ryots* in reducing settlement operations to a minimum of time and procedure. In the collection of revenue the Government consistently pursues a generous policy. In times of distress suspensions and remissions are freely granted after proper inquiry.

The amount of gross revenue raised on the land is estimated in 1918-19 at £22,358,500 out of a total from all sources in the same year of £86,109,600. This compares very favourably with the £34,000,000 of land revenue recorded as having been raised annually from a smaller empire by Aurangzebe.

The literature of the subject is considerable. The following should be consulted by readers who require fuller information:—"Land Revenue Policy of the Indian Government," 1902 (Superintendent of Government Printing); Baden Powell's "Land Systems of British India"; Sir John Strachey's "India, its Administration and Progress, 1911," (Macmillan & Co.); M. Joseph Chailley's "Administrative Problems of British India" (Macmillan & Co., 1910), and the Annual Administration Reports of the respective Provincial Government.

EXCISE.

The Excise revenue in British India is derived from the manufacture and sale of intoxicating liquors, hemp, drugs, toddy and opium. It is a commonplace amongst certain sections of temperance reformers to represent the traffic in intoxicating liquors as one result of British rule. There is, however, abundant evidence to show that in pre-British days the drinking of spirituous liquors was commonly practised and was a source of revenue.

The forms of intoxicating liquor chiefly consumed are country spirit; fermented palm juice; beer made from grain; country brands of rum; brandy, etc., locally manufactured malt beer and imported wine, beer and spirits. Country spirit is

the main source of revenue, except in the Madras Presidency, and yields about two-thirds of the total receipts from liquors. It is usually prepared by distillation from the Mhowra flower, molasses and other forms of unrefined sugar, fermented palm juice and rice. In Madras a very large revenue is derived from fresh toddy. The British inherited from the Native Administration either an uncontrolled Out-Still System or in some cases a crude Farming System and the first steps to bring these systems under control were the limitation of the number of shops in the area farmed, and the establishment of an improved Out-Still System under which the combined right of manufacture and sale at a special shop was annually granted. This of course was a kind of control, but it only enabled Government to impose haphazard taxation on the liquor traffic as a whole by means of vend fees. It did not enable Government to graduate the taxation accurately on the still-head duty principle nor to insist upon a standard of purity or a fixed strength of liquor. Moreover for political and other reasons the extent of control could not at first be complete. There were tribes of aborigines who regarded the privilege of making their own liquor in their private homes as a long established right; and who believed that liquor poured as libations to their god should be such as had been made by their own hands. The introduction of any system amongst those peoples had to be worked very cautiously. Gradually, as the Administration began to be consolidated, the numerous native pot-stills scattered all over the country under the crude arrangements then in force began to be collected into Central Government enclosures called Distilleries, thus enabling Government to perfect its control by narrowing the limits of supervision; and to regularize its taxation by imposing a direct still-head duty on every gallon issued from the Distillery. Under Distillery arrangements it has also been possible to regulate and supervise thoroughly the manufacture of liquor and its disposal subsequent to its leaving the Distillery by means of a system of transport passes, establishment supervision, improved distribution and vend arrangements.

Various Systems.

The Out-Still System may be taken to include all systems prior in order of development to the imposition of Still-head duty. Briefly stated the stages of development have been—First: farms of large tracts; Second: farms of smaller areas; Third: farms of the combined right to manufacture and sell at particular places without any exclusive privilege over a definite area; Fourth: farms of similar right subject to control of means and times for distilling and the like. The Provincial Governments have had to deal with the subject in different ways suited to local conditions, and so the order of development from the lower forms of systems to the higher has not been always everywhere identical in details. Yet in its essence and main features the Excise Administration in most provinces of British India has progressed on uniform lines the key note lying in attempts, where it has not been possible to work with the fixed duty system in its simplest forms, to combine the farming and fixed duty systems with the object of securing that every gallon of spirit should bear a certain amount of taxation. The Out-Still System has in its turn been superseded by either the Free-supply system or the District Monopoly system. The Free-supply system is one of free competition among the licensed distillers in respect of manufacture. The right of vend is separately disposed of. The District monopoly system on the other hand is one in which the combined monopoly of manufacture and sale in a district is leased to a farmer subject to a certain amount of minimum still-head duty revenue in the monopoly area being guaranteed to the State during the term of the lease.

The recommendations of the Indian Excise Committee of 1905-06 resulted in numerous reforms in British India, one of them being that the various systems have been or are gradually being superseded by the Contract Distillery System under which the manufacture of spirit for supply to a district is disposed of by tender, the rate of still-head duty and the supply price to be charged are fixed in the contract and the right of vend is separately disposed of. This is the system that now prevails over the greater portion of British India. The other significant reforms have been the revision of the Provincial Excise Laws and regulations, and the conditions of manufacture, vend, storage and transport, an improvement in the quality of the spirit, an improved system of disposal of vend licenses, reductions and re-distributions of shops under the guidance and control of local Advisory Committees and gradual enhancement of taxation with a view to checking consumption.

Since the issue of the report of the Excise Committee, 1905-06, no less than 213,000 square miles of territory were transferred from the out-still to the distilling system. In 1905-06 39 per cent. of the total excise area and 28 per cent. of the population of that area were served by out-stills, the proportions in 1912-13 were only 15 and 8 per cent. respectively.

The incidence of the total revenue derived from country distillery spirits per proof gallon during the quinquennium 1908-09 to 1912-13 was as follows:—

1908–09	.. .. .. Rs.	5·52
1909–10	.. .. .. ,,	5·72
1910–11	.. .. .. ,,	5·49
1911–12	.. .. .. ,,	5·84
1912–13	.. .. .. ,,	6·05

The incidence of revenue per proof gallon for the year 1915-16 was Rs. 7·45. It was highest in the Punjab, *viz.*, Rs. 12·52 and lowest in the N. W. Frontier Province, *viz.*, Rs. 2·85.

In the last year the incidence was highest in Berar 7·24 and lowest in Behar and Orissa 3·28. The average consumption of country spirits per 100 of the population in the distillery areas during the above period was as follows:—

1908–09	.. .. Gallons L. P.	4·43
1909–10	.. .. ,, ,,	4·11
1910–11	.. .. ,, ,,	4·40
1911–12	.. .. ,, ,,	4·52
1912–13	.. .. ,, ,,	4·75

In 1912-13 it was highest in Bombay 15·22 nd lowest in Bengal 2·13.

In 1915-16 the average consumption of coun- y spirit per 100 of population was 5·40 gallons P. It was highest in the Panjab, *viz.*, 16-96 nd lowest in Burmah 768.

Sap of the date, palmyra, and cocoanut palms alled toddy, is used as a drink either fresh r after fermentation. In Madras and Bombay he revenue is obtained from a fixed fee on every ree from which it is intended to draw the liquor nd from shop license fees. In Bengal and Burma he sale of shop licenses is the sole form of taxa- on. Country brands of rum, and so-called randies and whiskies, are distilled from grape uice, etc. The manufacture is carried out in rivate distilleries in various parts of India. A umber of breweries has been established, ostly in the hills, for the manufacture of a ght beer for European and Eurasian consump ón. The uniform fee of 4 annas 6 pies per allon is levied all over India at the time of sue.

Foreign liquor is subject to an import duty t the tariff rates, the most important of which Rs. 11-4-0 per proof gallon on spirit and 4 nnas 6 pies per gallon on beer. It can only be old under a license.

Since the war Brandy and Whisky are manu- ctured in considerable quantities at Baroda.

The base used is the Mhowra flower. It is drunk in big towns as a substitute for German spirit, and is excised at tariff rates.

DRUGS.—The narcotic products of the hemp plant consumed in India fall under three main categories, namely, ganja or the dry flowering tops of the cultivated female hemp plant charas, or the resinous matter which forms an active drug when collected separately; and bhang, or the dried leaves of the hemp plant whether male or female cultivated or uncultivated. The main features of the existing system are restricted cultivation under supervision, storage in Bonded Warehouses, payment of a quantitative duty before issue, retail sale under licenses and restriction on private possession. Licenses to retail all forms of hemp drugs are usually sold by auction.

OPIUM.—Opium is consumed in all provinces in India. The drug is commonly taken in the form of pills; but in some places, chiefly on social and ceremonial occasions, it is drunk dissolved in water. Opium smoking also prevails in the City of Bombay and other large towns. The general practice is to sell opium from the Government Treasury, or a Central Warehouse, to licensed vendors. The right of retail to the public is sold by annual auction to one or several sanctioned shops.

The opium revenue in 1918-19 is estimated at £3,191,800, and the Excise revenue at £10,373,700.

SALT.

The salt revenue was inherited by the British overnment from Native rule, together with a iscellaneous transit dues. These transit dues ere abolished and the salt duty consolidated nd raised. There are four great sources of upply; rock salt from the Salt range and ohat Mines in the Punjab; brine salt from he Sambhar Lake in Rajputana, salt brine ondensed on the borders of the lesser Rann of utch; and sea salt factories in Bombay, Madras nd at the mouth of the Indus.

The Salt Range mines contains an inexhaustble supply. They are worked in chambers xcavated in salt strata, some of which re 250 feet long, 45 feet wide and 200 et high. The Rajputana supply chiefly comes om the Sambhar Lake where brine is extracted nd evaporated by solar heat. In the Rann f Cutch the brine is also evaporated by solar eat and the product is known as Baragara alt. In Bombay and Madras sea water is t into shallow pans on the sea-coast and evaorated by solar heat and the product sold roughout India. In Bengal the damp climate gether with the large volume of fresh water om the Ganges and the Brahmaputra into he Bay of Bengal render the manufacture of a salt difficult and the bulk of the supply, both for Bengal and Burma, is imported from Liverpool, Germany, Aden, Bombay and Madras.

Broadly, one-half of the indigenous salt is manufactured by Government Agency, and the remainder under license and excise systems. In the Punjab and Rajputana the salt manufactories are under the control of the Northern India Salt Department, a branch of the Commerce and Industry Department. In Madras and Bombay the manufactories are under the supervision of Local Governments. Special treaties with Native States permit of the free movement of salt throughout India, except from the Portuguese territories of Goa and Damaun, on the frontiers of which patrol lines are established to prevent the smuggling of salt into British India.

From 1888-1903 the duty on salt was Rs. 2-8 per maund of 82 lbs. In 1903, it was reduced to Rs. 2; in 1905 to Rs. 1-8-0; in 1907 to Re. 1 and in 1916 it was raised to Rs. 1-4-0. The successive reductions in duty have led to a largely increased consumption, the figures rising by 25 per cent. between 1903-1908. To illustrate the growth of consumption, in 1902-03, with a tax of Rs. 2-8-0 per maund, the revenue was £5,586,068, for 1918-19 with a duty of Re. 1-4-0, the estimated revenue is £3,492,200.

CUSTOMS.

The import duties have varied from time to time according to the financial condition of the country. Before the Mutiny they were five per cent.; in the days of financial stringency which followed they were raised to 10 and in some cases 20 per cent. In 1875 they were reduced to five per cent., but the opinions of Free Traders, and the agitation of Lancashire manufacturers who felt the competition of the Indian Mills, induced a movement which led to the abolition of all customs dues in 1882. The continued fall in exchange compelled the Government of India to look for fresh sources of revenue and in 1894 five per cent. duties were re-imposed, yarns and cotton fabrics being excluded. Continued financial stringency brought piece-goods within the scope of the tariff, and after various expedients the demands of Lancashire were satisfied by a general duty of 3½ per cent. on all woven goods—an import duty on goods by sea, an excise duty on goods produced in the country. The products of the hand-looms are excluded. These excise duties are intensely unpopular in India, for reasons set out in the special article dealing with the subject. In 1910-11, in order to meet the deficit threatened by the loss of the revenue on opium exported to China, the silver duty was raised from 5 per cent. to 4d. an ounce, and higher duties levied on petroleum, tobacco, wines, spirits, and beer. These were estimated to produce £1 million annually.

The Customs Schedule was completely recast in the Budget of 1916-17 in order to provide additional revenue to meet the financial disturbance set up by the war. The general import tariff, which had been at the rate of 5 per cent. *ad valorem* since 1894 was raised to 7½ per cent. *ad valorem*, except in the case of sugar; as India is the largest producer of sugar in the world the import duty on this staple was fixed at 10 per cent. There was also a material curtailment of the free list. The principal article of trade which was not touched was cotton manufactures. For the past twenty years the position has been that cotton twists and yarns of all kinds are free of duty while a duty at the rate of 3½ per cent. is imposed on woven goods of all kinds whether imported or manufactured in Indian mills. The Budget left the position as it stood. The Government of India would have been glad to see the tariff raised to 5 per cent. without any corresponding alteration of the excise, but were over-ruled by the Cabinet on the ground that this controversial matter must come up for discussion after the war. Finally the Budget imposed export duties on tea and jute. In the case of tea the duty was fixed at Re. 1-8-0 per 100 lbs.; in the case of jute the export duty on raw jute was fixed at Rs. 2-4-0 per bale of 400 lbs., approximately equivalent to an *ad valorem* duty of 5 per cent.; manufactured jute was charged at the rate of Rs. 10 per ton on sacking and Rs. 16 per ton on Hessians.

The Customs Tariff was further materially modified in the Budget for 1917-18. In the previous year an export duty on jute was imposed at the rate of Rs. 2-4-0 per bale of 400 lbs. in the case of raw jute and Rs. 10 per ton on sackings, and Rs. 16 per ton Hessians; these rates were doubled, with view to obtaining an additional revenue £500,000. The import duty on cotton go was raised from 3½ per cent. to 7½ per c without any alteration in the Excise, wh remained at 3½ per cent. This change expected to produce an additional reve of £1,000,000. The question of the Ex was left untouched, for the reason, amo others, that the Government could not poss forego the revenue of £320,000, which it expected to produce. With these changes operation the revenue from Customs in 1918 is estimated at £10,714,400.

The Customs Department is administe by an Imperial Customs Service responsible the Imperial Government in the Departm of Commerce and Industry, but acting thro the Local Governments. The senior Collec are Covenanted Civilians specially ch for this duty; the subordinates are recru in India and in England (**Customs Tariff q.**

Income Tax.

The income tax was first imposed India in 1860, in order to meet the finan dislocation caused by the Mutiny. It levied at the rate of four per cent. little more than 9½ d. in the pound on all inco of five hundred rupees and upwards. M changes have from time to time been mad the system, and the present schedule was c solidated in the Act of 1886. This impose tax on all incomes derived from sources o than agriculture which were exempted. incomes of 2,000 rupees and upwards it at the rate of five pies in the rupee, or a 6¼d. in the pound; on incomes between 500 2,000 rupees at the rate of four pies in the ru or about 5d. in the pound. In March 1 the minimum taxable income was raised f 500 to 1,000 rupees. The income-tax sche was completely revised, raised, and gradua in the Budget of 1916-17 in the general scal increased taxation imposed to meet the de arising out of war conditions. All exist exemptions were left untouched and no alte tion was made in the taxation of persons wh incomes, official or private, were less than 5,000 per annum. In the case of inco which exceeded the sum of Rs. 5,000 per ann the tax was enhanced in the following way:—

(1) Incomes from Rs. 5,000 to Rs. 9,999 6 pies in the rupee, or 7½d. per pound.

(2) Incomes from Rs. 10,000 to Rs. 24, say 9 pies in the rupee, or 11¼d. in the pound.

(3) Incomes of Rs. 25,000 and upwards 1 anna in the rupee, which is equivalent to 3d. in the pound.

Profits of companies are assessed at th anna rate; but this is subject to abatem or exemption, to individual shareholders w can show that their total income is such as warrant a lower rate of taxation or none at Thus a shareholder whose income is less th Rs. 1,000 per annum from all sources obta

a refund of the entire tax previously recovered on his dividends; a man whose total income is Rs. 5,000 obtains a refund of the amount recovered in excess of the 6 pie rate; and so on.

In the Budget of 1917–18 the income tax was left untouched; but there was imposed a super-tax.

The super-tax begins in respect of income exceeding Rs. 50,000 and is levied on the following scale:—

For every rupee of the first Rs. 50,000 of the excess, *i.e.*, between Rs. 50,000 and 1 lakh: 1 anna per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between 1 and 1½ lakhs: 1½ annas per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between 1½ and 2 lakhs: 2 annas in the rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between 2 and 2½ lakhs: 2½ annas per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, on everything over 2½ lakhs: 3 annas per rupee.

These rates are, of course, in addition to the standard income tax at the rate of 1 anna in the rupee. The maximum income tax levied on this scale amounted to five shillings in the pound, income tax and super-tax combined.

The total yield of the income tax in the current year is estimated at £6,313,200.

THE DEBT.

On 30th September 1918, the national debt of India was 558 crores. This figure represents less than Rs. 23 per head of India's population; when compared with the public revenues, which in 1917-18 amounted to about 167 crores, constitutes a national indebtedness which, in comparison with the national resources, is very much smaller than that of most other nations. The reason why India is in this favourable position is mainly the care with which, in the long years of peace preceding the great war, her outlay was restricted to her available means, whereby the accumulation of wasteful and unproductive debt was avoided. At the commencement of the war India found herself in a position when almost the whole of her debt represented productive outlay on railways and irrigation, normally yielding a return considerably in excess of the interest which she had to pay on the amount borrowed, including the interest on the small amount of debt which could be described as unproductive.

Productive Debt.—The following table shows the amount of the national debt of India, both productive and non-productive, from time to time:—

[In Crores of Rupees.]

	Ordinary Debt.	Productive Debt.			Total of debt.
		Railways.	Irrigation.	Total.	
	1	2	3	4	5
On 31st March—					
1888	109·5	88·8	25·0	114·7	224·2
1893	97·5	136·5	28·9	165·4	262·9
1898	105·0	159·0	32·5	191·5	296·5
1903	88·7	192·1	37·2	229·3	318·0
1908	56·1	266·6	44·8	311·4	367·5
1913	37·5	317·7	56·4	374·1	411·6
1914	19·2	333·0	59·1	392·1	411·3
1915	3·3	349·8	61·6	411·4	414·7
1916	3·0	351·6	63·6	415·2	418·2
1917	10·5	353·6	64·9	418·5	429·0
1918	133·3	358·8	65·9	424·7	558·0

On the 31st March 1914, out of a total debt of 411 crores, only 19 crores represented ordinary or unproductive debt. The annual interest on the latter was only a crore, and on the productive debt about 13 crores, so that India's total interest charges then amounted to about 14 crores. On the other hand, railways and irrigation works, which had been financed from the productive debt, yielded in that year a return of nearly 23 crores, which left a margin of 9 crores of clear profit to the country, after meeting the interest charges on the entire debt. Even after the contribution of £100 millions to the cost of the war which India made in 1917, and which added over 30 per cent. to the national debt, the revenue from railways and irrigation amounted in the year 1917-18 to 32 crores, so that the revenue from productive expenditure amounted to 133 per cent. of the total interest charges. Had it not been for India's contribution of 150 crores to the expenses of the war the ordinary debt would have been completely wiped out in 1917, and the amount of the ordinary debt outstanding on 31st March 1918, namely, 133·3 crores was thus actually less than the amount of that contribution.

Financial Strength.—These are not the only facts which show the strength of India's financial position. The interest on her public debt is not only secured by the revenue from railways and irrigation works which were directly financed by borrowing, but is a charge on the public revenues as a whole. The following table shows the total revenue and expenditure of India (including the revenue and expenditure of the provinces) during the past six years.

	In Crores of Rupees.	
	Revenue.	Expenditure.
1912-13	130	119
1913-14	128	125
1914-15	122	128
1915-16	127	128
1916-17	147	132
1917-18	167	153

Form of Debt.—The existing rupee loans are of two kinds:—

(1) Those which Government has undertaken not to repay before a certain fixed date, but which are repayable at the option of Government at any time after that date, after giving notice.

(2) Those which Government has undertaken to repay either (*a*) on a certain fixed date, or (*b*) not earlier than a certain fixed and not later than another fixed date.

The following are the rupee loans now in existence :—

(*a*) Non-Terminable Loans.

1	2	3	4
Name of loan.	Half-yearly date of payment of interest.	Conditions of repayment. (Unless otherwise stated, repayment will be at par.)	Amount outstanding on March 31st, 1918.
			Rs.
1. 3½ per cent. loan of 1842-43..	1st February and 1st August.		20,94,86,000
2. 3½ per cent. loan of 1854-55.	30th June and 31st December.		29,43,39,000
3. 3½ per cent. loan of 1865 ..	1st May and 1st November.	Repayable at the option of Government after three months' notice.	34,13,09,000
4. 3½ per cent. loan of 1879 ..	16th January and 16th July.		3,41,37,000
5. 3 per cent. loan of 1896-97.	30th June and 31st December.		6,83,29,000
6. 3½ per cent. loan of 1900-01..	30th June and 31st December	Repayable not before 30th December 1920, and thereafter at the option of Government after three months' notice.	31,46,03,000
		Total ..	1,26,22,03,000

(*b*) TERMINABLE LOANS.

	Name of loan.	Half-yearly date of payment of interest.	Conditions of repayment.	Amount outstanding on March 31st, 1918.
				Rs.
1.	4 per cent. Terminable Loan of 1915-16.	31st May and 30th November.	Repayable not before 30th November 1920 and not later than 30th November 1923.	4,99,86,000
2.	4 per cent. Conversion Loan of 1916-17.	1st April and 1st October.	Repayable not before 1st October 1931 and not later than 1st October 1936.	9,97,32,000
3.	5 per cent. War Loan, 1929-47.	15th February and 15th August.	Repayable not before 15th August 1929 and not later than 15th August 1947.	25,00,35,000
4.	5½ per cent. War Bonds, 1920.*	15th February and 15th August.	Repayable on the 15th August 1920.	19,79,07,000
5.	5½ per cent. War Bonds, 1922.*	15th February and 15th August.	Repayable on the 15th August 1922.	11,94,64,000
			TOTAL ..	71,71,24,000

Indian War Loan 1917.

* *N.B.*—The interest on the loans marked* is exempt from income-tax, but not from super-tax.

(*b*) TERMINABLE LOANS—*concld.*

	Name of loan.	Half-yearly date of payment of interest.	Conditions of repayment.
6.	5½ per cent. War Bonds, 1921.*†	15th March and 15th September.	Repayable on the 15th September 1921.
7.	5½ per cent. War Bonds, 1923.*†	15th March and 15th September.	Repayable on the 15th September 1923.
8.	5½ per cent. War Bonds, 1925.*†	15th March and 15th September.	Repayable (at Rs. 103 per cent.) on the 15th September 1925.
9.	5½ per cent. War Bonds, 1928.*†	15th March and 15th September.	Repayable (at Rs. 105 per cent.) on the 15th September 1928.

Indian War Loan 1918.

N.B. *—The interest on the loans marked* is exempt from income-tax, but not from super-tax.

† These Bonds will be accepted at par during their currency, as the equivalent of cash for the purpose of subscription to any future long term loan, whatever its rate of interest may be.

There are also still in existence a few special loans, such as certain railway loans taken up by three Indian Chiefs, and a special 4 per cent. loan taken up by the Maharaja of Gwalior in 1887.

Sterling Debt.—Besides the rupee loans, the national debt of India consists of some £173 millions of sterling debt. In former years India was obliged to depend to a large extent on her borrowings in London to finance her expenditure on railways and irrigation, and the present sterling debt represents such of those loans as are still outstanding:—

(1) India 3½ per cent. stock, of which the amount outstanding on 31st March 1918 was about £ 90½ millions;

(2) India 3 per cent. stock, of which the amount outstanding on that date was about £65¼ millions;

(3) India 2½ per cent. stock, of which the amount outstanding on that date was about £ 11½ millions.

The remainder of the sterling debt is made up of some outstanding India bonds and certain railway debenture stocks, of which the amounts in each case are comparatively small, together with so much of India's contribution of £100 millions as has not been liquidated from the proceeds of the War Loans of 1917 and 1918; the amount of sterling debt outstanding on this account on the 30th September was about £28 millions representing the liability accepted by India for a corresponding amount of British War Loan.

Nature of Securities.—The three main forms in which the rupee debt is held are:—(*i*) *Stock* or, as it is sometimes called *Book Debt*; (*ii*) *Bearer Bonds*; (*iii*) *Promissory Notes.*

(*i*) When debt is held in the form of *Stock*, the owner is given a certificate to the effect that he has been registered in the books of the Public Debt Office as the proprietor of a certain amount of Government stock. This certificate is known as a *Stock Certificate*, and it is by that name that this form of debt is generally known.

(*ii*) A *Bearer Bond* certifies that the bearer is entitled to a certain sum of rupees in respect of the loan to which the bond relates.

(*iii*) A *Promissory Note* contains a promise by the Governor General in Council, on behalf of the Secretary of State for India, to pay a certain person a specified sum either on a specified date or after certain notice (according to the terms of the particular loan to which the promissory note relates), and to pay interest thereon at a certain rate half-yearly on certain specified dates.

Each of the above three forms of security is convertible by the holder into either of the other two.

Other Government Securities.—*Treasury Bills and Post Office Cash Certificates* are also forms of Government securities.

Treasury Bills, when issued, are in respect of temporary borrowing by the Government of India, and usually have a currency of from three to twelve months. They are sold at a discount and are paid at maturity at their full face value, the difference representing the yield on the investment. The lowest denomination issued is for Rs. 5,000. Their sale and payment at maturity are managed by the Presidency Banks.

Cash Certificates.—*Post Office Cash Certificates* are specially intended to facilitate the investment of small amounts and to encourage saving among people of small incomes. They have a currency of five years, at the expiry of which they will be repaid. The profit to the investor consists in the fact that they are sold for an amount less than the face value, thus cash certificates of denominations of Rs. 10, Rs. 20, Rs. 50, Rs. 100, and Rs. 500 can at present be obtained on payment of Rs. 7-12, Rs. 15-8, Rs. 38-12, Rs, 77-8 and Rs. 387- respectively. The maximum amount for which certificates may be held by any one person is Rs. 10,000 face value. The special attraction of these Cash Certificates is that the investor's money is not necessarily locked up for the full term of five years. He can, if he wishes, obtain payment at any time during the currency of the certificate, and he will then receive an amount which, according to the time he has held the certificate, gradually increases at compound interest from the original purchase price up to the full face value of the certificate at the end of five years. In the case of the Cash Certificates issued in connection with the Indian War Loan the yield to the investor ranges from 4 per cent a year, if he presents it for payment after having held it for one year only, to 5½ per cent. a year if he holds it for the full five years. The investor's profit is not subject to income-tax. These certificates are for sale all the year round and can be obtained at any Post Office which does savings bank business, and payment of the amount due can also be obtained at any such office.

and the PROPORTION of the RUPEE DEBT held in LONDON, from 1820-21 to 1916-17.

	Registered debt in India.	Registered debt in London.	Interest payable.		Amount borrowed and paid off each year (Borrowed + ; paid off—)		Proportion of the registered rupee debt held in London on 31st March.
					In India.	In England.	
	Rs.	£	Rs.	£	Rs.	£	Rs.
1820–21	27,24,77,630	5,762,888	1,63,15,400	253,247	—26,73,970	—109,268	
1830–31	33,12,96,680	3,750,479	1,74,19,770	93,377	+75,52,710	—45,413	
1840–41	29,47,65,040	1,756,992	1,35,37,050	59,856	+1,15,89,400	—400	
1850–51	45,42,87,550	3,920,592	2,12,39,750	136,482	+1,00,72,750	—100	
1860–61	63,44,58,100	28,496,917	2,88,34,460	1,249,832	—10,05,920	+4,138,000	
1861–62	63,42,08,450	32,116,217	2,88,32,440	1,457,874	—2,49,650	+3,619,300	
1862–63	63,82,11,060	31,860,017	2,89,95,320	1,430,765	+40,02,610	—256,200	(a)
1863–64	63,40,38,320	26,332,517	2,88,06,180	1,209,621	—41,72,740	—5,527,500	
1864–65	63,36,66,840	26,146,017	2,88,00,400	1,233,165	—3,71,480	—186,500	
1865–66	62,38,10,770	26,967,317	2,84,13,900	1,274,230	—98,56,070	+821,300	
1866–67	62,97,84,230	28,559,917	2,87,13,200	1,402,540	+59,73,460	+1,592,600	
1867–68	63,76,50,020	29,718,417	2,91,57,860	1,448,875	+78,65,790	+1,158,500	
1868–69	63,41,06,910	31,218,917	2,89,87,270	1,469,916	—35,43,110	+1,500,500	15,38,06,930
1869–70	65,59,34,220	35,217,617	2,98,17,500	1,629,868	+2,18,27,310	+3,998,700	16,24,51,720
1870–71	66,80,96,570	37,627,617	3,01,56,310	1,726,268	+1,21,62,350	+2,410,000	17,64,70,910
1871–72	67,96,89,420	39,012,617	2,98,08,300	1,781,618	+1,15,92,850	+1,385,000	13,56,38,630
1872–73	66,45,83,690	39,012,617	2,89,20,500	1,831,467	—1,51,05,730	....	13,04,77,110
1873–74	66,41,72,910	41,117,617	2,89,50,060	1,867,121	—4,10,780	+2,105,000	13,27,22,050
1874–75	69,84,99,590	48,597,033	3,03,35,320	2,165,364	+3,43,26,680	+7,479,416	14,05,71,800
1875–76	72,77,29,810	49,797,033	3,15,20,180	2,212,582	+2,92,30,220	+1,200,000	15,45,77,080
1876–77	71,92,31,260	55,397,033	3,10,98,710	2,436,271	—84,98,550	+5,600,000	14,21,01,660
1877–78	74,95,45,200	59,677,033	3,22,68,610	2,607,472	+3,03,13,940	+4,280,000	15,78,70,170
1878–79	78,83,89,260	59,029,117	3,25,77,260	2,581,555	+3,88,44,060	—647,916	17,14,82,760
1879–80	82,87,25,090	68,855,556	3,41,76,560	1,937,886	+4,03,35,830	+9,826,439	20,52,60,670
1880–81	85,95,97,460	71,429,133	3,55,92,700	2,846,478	+3,08,72,370	+2,573,577	20,26,31,450
1881–82	88,65,31,620	68,181,947	3,66,43,280	2,708,198	+2,69,34,160	—3,287,186	22,65,59,550
1882–83	90,68,87,660	68,585,694	3,74,11,490	2,725,748	+2,03,56,040	+443,747	22,58,11,320
1883–84	93,19,13,840	68,108,837	3,84,91,140	2,704,207	+2,50,26,180	—476,857	22,08,75,180

(a) No information.

AMOUNT of the RUPEE and STERLING DEBT—(*contd.*).

—	Registered debt in India.	Registered debt in London.	Interest payable.		Amount borrowed and paid off each year (Borrowed + ; paid off—)		Proportion of the registered rupee debt held in London on 31st March.
					In India.	In England.	
	Rs.	£.	Rs.	£.	Rs.	£.	Rs.
1884–85	93,18,36,600	69,271,088	3,84,18,550	7,691,828	—77,240	+1,162,251	21,83,98,370
1885–86	92,70,39,820	73,806,621	3,77,38,380	2,833,068	—47,96,780	+4,535,533	20,71,23,580
1886–87	92,65,36,360	84,228,177	3,82,02,570	3,165,411	—5,03,460	+10,421,556	19,14,95,570
1887–88	98,08,98,620	84,140,148	4,03,78,580	2,918,039	+5,43,62,260	—88,029	20,81,88,870
1888–89	1,00,87,97,420	95,033,610	4,13,73,120	3,230.474	+2,78,98,800	+10,893,462	21,71,40,680
1889–90	1,02,76,11,750	98,192,391	4,21,56,080	3,327,348	+1,88,14,330	+3,158,781	21,59,40,490
1890–91	1,02,74,65,550	104,408,208	4,17,51,110	3,524,376	—1,46,200	+6,215,817	26,73,12,950
1891–92	1,02,69,23,170	104,404,143	4,17,15,000	3,602,349	—5,42,380	+2,995.935	27,50,58,410
1892–93	1,02,93.75,520	106,683,767	4,12,77,760	3.570,682	+24,52,350	—720,376	25,93,38,610
1893–94	1,05,54,60,780	114,113,792	4,20,92,060	3,687,986	+2,60,85,260	+7,430.025	24,16,55,410
1894–95	1,04,37,37,400	116,005,826	3,61,09,140	4,825,323	—1,17,23,380	+1,892,034	23,62.59,660
1895–96	1,03,78,89,280	115,903,732	3,64,00,740	3,607,832	—58,48,120	—102.094	25,35,07 520
1896–97	1,09,11.50,530	114,883,233	3,78,43,760	3,813,208	+5,37,61,250	—1,020,499	24,06,66,620
1897–98	1,11,69,56,340	123,274,680	3,87,11,060	3,940,776	+2,58,05,810	+8,391,447	21,50,87,030
1898–99	1,12,65.46.980	124,268,605	3,91,13,340	3,882,758	+95,90.640	+993.925	21,44,12,330
1899–1900	1,12,47,47,010	124.144,401	3,90,56,310	3,877.026	—17,99,970	—124 204	20,81,88,234
1900–01	1,15,33,19,058	133,435,377	4,00,58,600	4 158,351	+2,85,72,048	+9,290,978	22,18,12,135
1901–02	1,16,19,13,834	134.307,090	4,03,60,615	4,213,821	+85,94,775	+871,711	20,36,22,034
1902–03	1,17,55,40.660	133,796.261	4,08,37,864	4,213,537	+1,36,26,827	—510,829	18,63,35,034
1903–04	1,19,42,43,035	133,045,844	4,14,90,065	4,238,273	+1,87,02.375	—750,417	17,13,92,234
1904–05	1,22,29,78,235	132,887,191	4,24,92,526	4,282,744	+2,87,35,200	—158.653	16,81,55,234
1905–06	1,26,08,10,618	146,457,439	4,38,10,365	4,715,233	+3,78,32,383	+13,570,248	16,43,82,933
1906–07	1,30,45,50,655	147,518.634	4,53,38,937	4,743,108	+4,37,40.037	+1,061,195	16,49,16,833
1907–08	1,32,82,94.955	156.481,074	4,61,66,110	5,053,632	+2,37,44.300	+8,962,440	15.23,21,733
1908–09	1,34,56,60,505	160,973,369	4,68,19,197	5,210,695	+1,73,65.550	+4,492,295	14,43.66,433
1909–10	1,36,84,33.105	170.105,911	4,76,47,428	5,530,758	+2.27,72,600	+9,132,542	15,21,19,933
1910–11	1,38,09,72,155	177,998,335	4,81,24,302	5,668,417	+1,25,39,050	+7,892,424	12,78.49,733
1911–12	1,39.96,36,205	178,486,597	4,87,76,458	5,705,597	+1,86,64,050	+488.262	11,73,03,533
1912–13	1,42,83,64.790	179,179,193	4,97,78.481	5,749,887	+2,87,28,585	+692,596	11,20,29,433
1913–14	1,45,68,55.790	177,064.757	5,07,80,519	5,693,919	+2.84,91,000	—2.114,436	10,08,74.333
1914–15	1,50,52,65,200	176,19),358	5,25,30,534	5,682.898	+4,84,09,410	— 874,399	9,72.99,850
1915–16	1,55,45,97,709	175,171,829	5,45.29.991	5,665,349	+4,93,32,500	—1,018,529	8,82,51,650
1916–17	1,62,86,03,073	174,144,724	5,74,23,729	5,647,491	+7,40,05,373	—1,027,105	8,30,41,600

INDIAN DEBT IN ENGLAND.

RETURN of all LOANS raised in *England*, under the Provisions of any Acts of Parliament, chargeable on the REVENUES of *India*, outstanding at the Commencement of the Half-year ended on the 31st March 1918

DESCRIPTION OF LOAN.	Total Amount of Interest payable thereon during the Half-year ended 31st March 1918.	DATE OF TERMINATION OF LOAN.	Amount of Debt paid off or discharged during the Half-year ended 31st March 1918	Amount of Debt outstanding on 31st March 1918
LOANS BEARING INTEREST.	£		£	£
India 3½ per cent. Stock	1,586,207	Not redeemable until 5th January 1931, but on or after that day, upon one year's previous notice having been given by the Secretary of State for India in Council ..	133,522 47,565	90,519,304
India 3 per cent. Stock	980,031	Not redeemable until 5th October 1948, but on or after that day upon one year's previous notice having been given by he Secretary of State for India in Council ..	55,219 17,147	65,269,189
India 2½ per cent. Stock	146,062	Not redeemable until 5th October 1926, but on or after that day, upon one year's previous notice having been given by the Secretary of State for India in Council	....	11,684,987
India Bonds	17,500	One-eight part of £4,000,000 redeemable at par on the 12th October in each of the eight years from 1911 to 1918 both inclusive, the bonds to be reemed in each year being determined by lot and paid off	500,000	500,000
East Indian Railway Debenture Stock 4½ per cent.	32,302	.....	....	1,435,650
Eastern Bengal Railway Debenture Stock 4 per cent.	6,973	.....	....	348,666
South Indian Railway Debenture Stock 4½ per cent.	9,562	.....	....	425,000
Great Indian Peninsula Railway Debenture Stock 4 per cent. ..	54,029	.....	....	2,701,450
LOANS NOT BEARING INTEREST.		Total Debt in England bearing Interest..	753,453	172,884,246
India 5 per cent. Stock	....	5th July 1880	....	9,305
India 4 per cent. Stock	....	10th October 1888	....	5,616
		Total Debt in England not bearing Interest..	....	14,921
	2,832,666	Total Debt in England	753,453	172,899,167

India Debt created and issued under the East India Loans (Railways and Irrigation) Act 1910 to the 31st March 1918.

INTEREST EXPENDITURE.

	1915-1916.	1916-1917.	1917-1918. Revised.	Budget. 1918 1919.
INTEREST ON DEBT OTHER THAN THAT CHARGED TO RAILWAYS AND IRRIGATION WORKS—				
Interest on total Debt—				
1. India .. .. R .	5,70,46,941	5,66,67,195	9,43,00,000	10,61,00,000
£ .	3,803,130	3,777,813	6,286,700	7,073,300
2. England .. .. £ ..	6,182,399	5,846,832	9,938,800	9,196,200
Total ..	9,985,529	9,624,645	16,225,500	16,269,500
Deduct—Amount charged to—				
(*a*) Railways:				
(*i*) India .. .. R .	6,42,62,141	6,20,88,181	6,34,16,000	6,51,65,000
£ ..	4,284,143	4,139,212	4,227,800	4,344,300
(*ii*) England .. £ ..	3,738,480	3,620,110	3,600,000	3,588,600
Total Railways .. £ ..	8,022,623	7,759,322	7,827,800	7,932,900
(*b*) Irrigation:				
(*i*) India .. .. R .	1,98,60,762	1,93,89,288	1,98,08,000	2,02,24,000
£ ..	1,324,051	1,292,620	1,320,500	1,348,300
(*ii*) England .. £ ..	127,299	120,585	120,800	121,000
Total Irrigation . £ ..	1,451,350	1,413,205	1,441,300	1,469,300
Total deduction . £ ..	9,473,973	9,172,527	9,269,100	9,402,200
Interest on Ordinary Debt .. £ ..	511,556	452,118	6,956,400	6,867,300
Distribution of above—				
Imperial .. .. £ ..	271,214	229,306	6,743,500	6,659,100
Provincial .. .. £ ..	240,342	222,812	212,900	208,200
INTEREST ON OTHER OBLIGATIONS—				
On Savings Bank Balances converted at R15=£1 £ ..	473,085	513,795	638,100	679,500
Other items .. .. £ ..	205,723	208,951	203,000	237,500
Total	678,808	722,746	841,100	917,000
GRAND TOTAL ..	1,190,364	1,174,864	7,797,500	7,784,300

INTEREST EXPENDITURE—*contd.*

	915-1916.	1916-1917.	1917-1918. Revised.	Budget. 1918-1919.
Debt outstanding on 31st March—	£	£	£	£
Sterling	182,171,829	174,144,724	238,505,524	218,005,524
Rupee Debt—	Rs.	Rs.	Rs.	Rs.
New Loan	....	....	....	30,00,00,000
5½ per cent.	....	4,91,67,255	31,75,34,255	31,75,34,255
5 per cent.	....	1,10,51,523	27,09,65,523	26,65,65,523
4 per cent.	8,18,86,000	21,46,54,000	16,10,77,000	15,98,77,000
3½ per cent.	1,38,50,89,600	1,32,02,13,950	1,18,90,98,950	1,18,94,58,950
3 per cent.	7,75,47,200	7,26,69,400	6,61,93,400	6,57,73,400
Treasury Bills	....	....	43,00,00,000	43,00,00,000
Temporary loans	6,50,00,000	50,00,000	4,00,00,000	....
Other Debt..	1,00,74,900	1,00,14,200	1,00,14,200	1,00,14,200
Savings Bank Balances ..	23,13,00,699	25,25,68,358	30,61,37,358	32,35,23,358

The total provision of £6 million allotted in the Budget estimate for the current year for the service of India's contribution to the war will be applied in the current and next years as follows:—

	1917-1918	Budget. 1918-19.
	£	£
In India—		
Interest and miscellaneous charges for Indian war loan, 1917..	1,152,200	1,582,000
Discount on long term Indian war loan (1929-47) ..	418,100	....
Sinking fund for long term Indian war loan (1929-47) at 1½ per cent. on the amount of loan created by fresh issue and conversion	276,700	273,300
Lump provision for charges connected with new Indian war loan	....	666,700
Total ..	1,847,000	2,522,000
In England—		
Interest on British 5 per cent. war loan (1929-47) taken over by India	3,340,100	3,006,200
Sinking fund in respect of British 5 per cent. war loan (1929-47) taken over by India	812,900	471,800
Total ..	6,000,000	6,000,000

THE INDIAN MINTS.

The following statement shews the details of the **silver coinage** executed for the Government of India in the two mints during 1917-18 :—

	Calcutta.	Bombay.	Total.
	Value in Rs.	Value in Rs.	Value in Rs.
Rupees	9,07,00,000	13,51,33,293	22,58,33,293
Half-Rupees	....	44,11,140	44,11,140
Quarter-Rupees	52,67,909	....	52,67,909
Eighth-Rupees	31,94,945	....	31,94,945
Total ..	9,91,62,854	13,95,44,433	23,87,07,287
Total for 1916-17 ..	16,23,66,945	14,53,40,381	30,77,07,326

The bulk of the coinage was from purchased silver. Withdrawn and uncurrent coin of the total nominal value of Rs. 1,26,76,902 was received at the two Mints for recoinage. The demand for small coin has been steadily increasing during the past two years, and a large amount of fractional silver coinage was necessary to keep up stocks. Besides the above, the following subsidiary silver coinage was executed during the year on behalf of other Governments :—

Denomination of coin.	Calcutta Mint.		Bombay Mint.		Government on whose behalf the coinage was executed.
	Tale.	Value in Rupees.	Tale.	Value in Rupees.	
Ceylon .. 50 cents ..	1 072,840	5.36,420	....	....	Ceylon Government.
Ceylon .. 25 ,, ..	312,000	78,000	....	....	Ceylon Government.
Ceylon .. 10 ,, ..	879,455	87,955	....	....	Ceylon Government.
Straits .. 20 ,, ..	....	....	551,641	1,68,120	Straits Government.
Straits .. 10 ,, ..	....	....	6,099,860	8,73,542	Straits Government.
Egyptian. 20 piastres .	....	....	504,168	11,00,213	Egyptian Government.
Egyptian. 10 ,, ..	....	....	2,994,932	32,67,826	Egyptian Government.
Egyptian. 5 ,, ..	....	....	4,983,402	27,18,612	Egyptian Government.
Egyptian. 2 ,, ..	....	....	2,861,190	6,24,378	Egyptian Government.

Nickel and Bronze Coinage.—One-anna nickel coins numbering 58,066,665 pieces of the nominal value of Rs. 36,29,167 were struck during the year at the Bombay Mint against 39,087,087 pieces coined during the previous year. In addition the Bombay Mint carried out nickel coinage for the Egyptian Government consisting of 5 and 10 millieme pieces, valued at Rs. 5,56,579. During the closing months of 1917, the coinage of the new nickel two-anna pieces was commenced. The designs and punches for the new coin were prepared at the Calcutta Mint but the actual coining was taken up at both Mints. By the 31st March, 1918, 3,848,000 pieces of the nominal value of Rs. 4,81,000 had been turned out at the two Mints. The **Bronze Coinage** was as usual confined to the Calcutta Mint and consisted of pice, half-pice and pie pieces of the aggregate value of Rs. 16,03,600 as compared with Rs. 2,65,900 in 1916-17. This large quantity of bronze coinage was necessitated by an increase in the demand, and by the withdrawal of the old copper coin, which has been going on at treasuries during the past few years. The Calcutta Mint also coined Rs. 20,000 worth of copper cents and half cents for the Ceylon Government and Rs. 4,80,000 worth of bronze pennies and half-pennies for the Australian Commonwealth.

The **Indian denominations** with their British equivalents are :—

Pie	=	1/12 penny.
Pice (3 pies)	=	1 farthing.
Anna (12 pies)	=	1 penny.
Rupee (16 annas)	=	1s. 4d.

A lakh (lac) is 100,000 rupees and a crore is 100 lakhs.

The equivalents of the rupee in various currencies are approximately as follows :—

One rupee = 1·68 franc (France, Italy, Belgium, &c.).
,, = 1·36 mark (Germany).
,, = 1·6 krone (Austria-Hungary).
,, = 0·324 dollar (United States).
,, = 0·65 yen (Japan):

The denominations of currency notes in circulation are 1. 2½, 5, 10, 50, 100, 500, 1,000, and 10,000 rupees.

HISTORY OF THE COINAGE.

The Indian mints were closed to the unrestricted coinage of silver for the public from the 26th June 1893, and Act VIII of 1893, passed on that date, repealed Sections 19 to 26 of the Indian Coinage Act of 1870, which provided for the coinage at the mints for the public of gold and silver coins of the Government of India. After 1893 no Government rupees were coined until 1897, when, under arrangements made with the Native States of Bhopal and Kashmir, the currency of those States was replaced by Government rupees. The re-coinage of these

rupees proceeded through the two years 1897 and 1898. In 1899 there was no coinage of rupees; but in the following year it seemed that coinage was necessary, and it was begun in February 1900, the Government purchasing the silver required, and paying for it mainly with the gold accumulated in the Paper Currency Reserve. In that and the following month a crore of rupees was coined and over 17 crores of rupees in the year ending the 31st March 1910 including the rupees issued in connection with the conversion of the currencies of Native States. From the profit accruing to Government on the coinage it was decided to constitute a separate fund called the Gold Reserve Fund as the most effective guarantee against temporary fluctuations of exchange. The whole profit was invested in sterling securities, the interest from which was added to the fund. In 1906 exchange had been practically stable for eight years, and it was decided that of the coinage profits devoted to this fund, six crores should be kept in rupees in India, instead of being invested in gold securities. The Gold Reserve Fund was then named the Gold Standard Reserve. It was ordered in 1907 that only one-half of the coinage profits should be paid into the reserve, the remainder being used for capital expenditure on railways. The Gold Standard Reserve was called into action before the year 1907-08 was out. Exchange turned against India, and in March 1908, the Government of India offered bills on the Secretary of State up to half a million sterling, while the Secretary of State sold £1,000,000 Consols in order to meet such demands. During April to August, further sterling bills were sold for a total amount of £8,058,000. On a representation by the Government of India, the Secretary of State agreed to defer the application of coinage profits to railway construction until the sterling assets of the Gold Standard Reserve amounted to £25,000,000. On the outbreak of the war in August 1914 the Reserve was drawn upon to meet the demands for sterling remittances, and Government offer to sell £1,000,000 of Bills weekly. The extent of these rates is shown on pp. 191, 192.

Gold.

Since 1870 there had been no coinage of double mohurs in India and the last coinage of single mohurs before 1918, in which year coinage was resumed, was in the year 1891-92.

A Royal proclamation was issued in 1918 establishing a branch of the Royal Mint at Bombay. It stated:—Subject to the provision of this proclamation the Bombay Branch Mint shall for the purpose of the coinage of gold coins be deemed to be part of the Mint, and accordingly, (a) the Deputy Master of the Bombay Branch Mint shall comply with all directions he may receive from the Master of the Mint whether as regards the expenditure to be incurred or the returns to be made or the transmission of specimen coins to England or otherwise and (b) the said specimen coins shall be subject to the trial of the pyx under section 12 of the Coinage Act, 1870, so that they shall be examined separately from the coins coined in England or at any other branch of the Mint, and (c) the Deputy Master of the Bombay Branch Mint and other officers and persons employed for the purpose of carrying on the business of the Branch Mint may be appointed, promoted suspended and removed and their duties assigned and salaries awarded and in accordance with the provisions of section 15 of the Coinage Act 1870. Gold Mohurs and sovereigns were issued from this Mint during 1918.

Act XXII of 1899, passed on the 15th September 1899, provided that gold coin (sovereign and half-sovereigns) shall be a legal tender in payment or on account at the rate of fifteen rupees for one sovereign.

Silver.

The weight and fineness of the silver coins are:—

—	Fine Silver. grains.	Alloy. grains.	Total. grains.
Rupee	165	15	180
Half-rupee ..	82½	7½	90
Quarter-rupee or 4-anna piece ..	41¼	3¾	45
Eighth of a rupee or 2-anna piece ..	20⅝	1⅞	22½

One rupee = 165 grains of fine silver.
One shilling = 80$\frac{4}{11}$ grains of fine silver.
One rupee = shillings 2·0439.

Copper and Bronze.

Copper coinage was introduced into the Bengal Presidency by Act XVII of 1835, and into the Madras and Bombay Presidencies by Act XXII of 1844.

The weight of the copper coins struck under Act XXIII of 1870 remained the same as it was in 1835. It was as follows:—

	Grains troy.
Double pice, or half-anna	200
Pice or quarter-anna	100
Half-pice or one-eighth of an anna ..	50
Pie, being one-third of a pice or one-twelfth of an anna	33⅓

The weight and dimensions of bronze coins are as follows:—

	Standard weight in grains troy.	Diameter in millimetres.
Pice	75	25·4
Half-pice	37½	21·15
Pie	25	17·45

Nickel.

The Act of 1906 also provides for the coinage of a nickel coin. It was directed that the nickel one-anna piece should thenceforth be coined at the Mint and issue. The notification also prescribed the design of the coin, which has a waved edge with twelve scollops, the greatest diameter of the coin being 21 millimetres, and its least diameter 19·8 millimetres. The desirability of issuing a half anna nickel coin was considered by the Government of India in 1909, but after consultation with Local Governments it was decided not to take action in this direction until the people had become thoroughly familiar with the present one-anna coin. The two-anna nickel coin was introduced in 1917-18.

The Paper Currency.

Under Acts VI of 1839, III of 1840, and IX of 1843, the Presidency Banks of Bengal, Bombay, and Madras were authorised to issue notes payable on demand, but the issue of the notes was practically limited to the three cities of Calcutta, Bombay, and Madras. These Acts were repealed, on the 1st March 1862, by Act XIX of 1861, providing for the issue of a paper currency through a Government Department, by means of notes of the Government of India payable to bearer on demand. Since then no banks have been allowed to issue notes in India.

Act II of 1910 amended and consolidated the law on the subject. By it, a note of the value of five, ten, or fifty rupees, as well as a note of any other denominational value which the Governor General in Council may, by notification in the *Gazette of India*, so specify, was declared to be a "universal currency note," that is, legal tender throughout British India and encashable at any office of issue in British India; the then existing sub-circles of Cawnpore, Lahore, Karachi, and Calicut were abolished, and the first three of these constituted separate circles of issue in addition to Calcutta, Madras, Bombay, and Rangoon. At the same time, by a notification issued under the Act, the further issue of 20-rupee notes was discontinued. By another notification issued in 1911 under section 2 of the same Act a currency note of the denominational value of one hundred rupees was declared to be a "universal currency note."

Department of Paper Currency.

The function of this department is to issue, without any limits, promissory notes (called currency notes) of the Government of India payable to the bearer on demand, of the denominations of Rs. 1, 2/8, 5,10, 50, 100, 500, 1,000, and 10,000, the issue being made in exchange for rupees or half rupees or for gold coin, which is legal tender, from any Paper Currency office or agency, and for gold bullion and gold coin, which is not legal tender, from circle offices on the requisition of the Comptroller General.

Supply and issue of Currency Notes.

Currency notes are supplied by the Secretary of State through the Bank of England on an indent from the Head Commissioner. The Head Commissioner or Commissioners supply Currency Agents with all the notes required for the purposes of the Paper Currency Act. Every such note, other than a "universal" note, bears upon it the name of the place from which it is issued and every note is impressed with the signature of the Head Commissioner or of a Commissioner or Deputy Commissioner.

The officers in charge of the circles of issue are authorised to issue, from the office or offices established in their circles, currency notes in exchange for the amount thereof (1) in rupees or half-rupees or in gold coin which is legal tender under the Indian Coinage Act; or in rupees made under the Native Coinage Act, IX of 1876, and (2) on the requisition of the Comptroller General, to all treasuries, in gold coin which is not legal tender under the Coinage Act or gold bullion at the rate of one Government rupee for 7·53344 grains troy of fine gold. Currency notes can also be issued against gold coin of bullion or silver bullion or sterling securities held by the Secretary of State for India in Council.

Notes when legal tender.

Every note is a legal tender in its own circle (except by Government at the office of issue) for the amount expressed in that note; that is to say, whenever a note forms the integral sum or a portion of any payment, either to Government on account of a revenue or other claim, or to any body corporate or person in British India, it is a legal tender. Five, ten, fifty and hundred rupee notes are legal tender throughout British India.

Notes of higher denominations than five, ten, fifty and hundred rupees are payable only at the office or offices of issue of the town from which they have been issued. In ordinary circumstances every Government treasury, of which there are about 250 in British India, cashes or exchanges notes if it can do so without inconvenience; and when this cannot be done conveniently for large sums, small sums can generally be exchanged for travellers.

The whole amount of currency notes in circulation is secured by a reserve of gold and silver coin or bullion and securities of the Government of India or of the United Kingdom.

The Currency and the War.

The history of the Indian currency during the war is one of somewhat strange vicissitudes. It was always anticipated that in time of crisis the great demand on the Indian system would be for gold to meet the remittances to London, accompanied by a simultaneous demand for the encashment of rupees in India. At first these anticipations were realised. The moment hostilities broke out there was a demand for sterling remittance, this was met by the free issue of sterling bills, commonly called Reverse Councils, on London, until the demand was exhausted. There was a demand for the encashment of Notes, this was wisely faced not by reducing the facilities for encashment; but by increasing them. This measure was entirely efficacious and the uneasiness soon subsided. Thereafter a series of surprises was in store for those in authority. The immense demand for Indian produce, at very high prices, accompanied by a diminished import trade, arising from the diversion of the manufacturing power of Great Britain and the shortage of freight, with heavy Expenditure in India on behalf of the Home Government set up an unprecedented demand for currency. It was accentuated by the virtual cessation of private trade in bullion, one of the sources from which India in ordinary times meets the balance of trade in her favour. This induced a very large expansion in the volume of currency, both the Note issue and the metallic circulation. The appetite for rupees was insatiable and was met only by heavy purchases from the United States; and although it was reduced by the issue of Notes of smaller denominations, namely of one rupee and two rupees eight annas, it still persists and is a source of considerable embarrassment at a time when the whole world is clamouring for the precious metals.

Demand for Currency.

The extent of this demand for currency will be seen from the following table. In 1913-14, the last pre-war year, the total demand for currency amounted to Rs. 23,84 lakhs; in the last financial year it reached a total of Rs. 33,15 lakhs, the largest on record. The figures are in lakhs of rupees:—

	1917–18.
(1) SILVER—	
New rupee coinage	+23,12
Increase (—) or decrease (+) in the Currency Reserve of Rupees ..	+6,68
Exports from India	—1,62
TOTAL SILVER ..	+28,18
(2) GOLD—	
Net imports of sovereigns (through Currency)	+9,03
Increase (—) or decrease (+) in Currency Reserve of sovereigns in India	+2,42
Transfer from or to the Gold Standard Reserve	+15
TOTAL GOLD ..	+11,60
(3) Increase (+) or decrease (—) in the circulation of currency notes .	+13,42
(4) Increase (—) or decrease (+) in Treasury balances	—5
GRAND TOTAL CURRENCY DEMANDS	+53,15

India's Demand for Silver.

The rupee coinage was exceedingly heavy. In discussing it the Controller of currency, in his last annual report, says:—The rupee coinage of the year amounted to 23,12 lakhs, while the net reduction in the rupee balances in treasuries and in Currency was 6,36 lakhs. Deducting the rupees shown in the trade accounts as having been exported by sea from India, the actual number of rupees added in the year to the circulation in the hands of the public was thus 27,86 lakhs. Compared with 1916-17, when the absorption was 33,81 lakhs, the absorption in 1917-18 was on a somewhat smaller scale. It will be of interest to note here that between the 1st August 1914 and 31st March 1918 the number of rupees passed into circulation was 78,93 lakhs, representing just over 270 million ounces of fine silver. The total world production in the four years 1914 to 1917 has been estimated at 650 million ounces, so that Indian coin requirements in the 44 months in question alone represent more than 41 per cent. of the estimated world production in those four years. To the coin requirements must be added the net imports of silver on private account which in the same period have amounted to 128 million ounces, bringing the total quantity of silver absorbed in India between the dates mentioned to 398 million ounces."

Demand for Sovereigns.

In order to reduce the drain on the Paper Currency Reserve sovereigns were issued; these, owing to the premium on gold, immediately disappeared. On this subject the Controller of Currency says:—

"As regards sovereigns, the absorption amounted to Rs. 11,66 lakhs. It can safely be asserted that the whole of this amount went into hoards or the melting pot, and represents no real addition to the circulation as a matter of fact, the absorption of sovereigns in the year was somewhat larger than is disclosed by the above statement, for the figures there given do not include sovereigns imported and passed into consumption without presentation at a Government office or treasury. In normal times the proportion of such imports to those which are tendered to the Currency Department is not very serious and possesses no special significance. The reduction, since the outbreak of war, in private imports of gold, which is largely required for use in connection with the arts, has caused a scarcity value to attach to the sovereign as a commodity and imported sovereigns have consequently not found their way into the currency of the country. Currency sovereigns were released in the year between April and August 1917 and again in February and March 1918 to relieve the strain on the silver balances. They were issued primarily in connection with the purchase in Northern India of wheat for the Royal Commission, though both in April 1917 and in February and March 1918, issues were also made in certain districts of Madras and certain of the cotton-growing districts of Bombay.

The Note Circulation.

The following table illustrates the increase in the Note circulation as compared with previous years:—

(In lakhs of rupees.)

YEAR.	CIRCULATION ON 31ST MARCH.			Increase in average active circulation.
	Gross.	Net	Active	
1899-1900 ..	28,74	27,04	22,10	..
1904-05 ..	39,18	36,30	28,46	+6,84
1909-10 ..	54,41	49,10	39,98	+9,10
1910-11 ..	54,99	48,41	40,17	+1,54
1911-12 ..	61,36	56,17	44,61	+3,14
1912-13 ..	68,98	56,30	47,32	+3,50
1913-14 ..	66,12	58,72	49,97	+1,24
1914-15 ..	61,63	55,65	43,96	—1,20
1915-16 ..	67,73	64,13	53,19	+2,65
1916-17 ..	86,37	81,98	67,08	+11,28
1917-18 ..	99,79	97,78	84,39	+12,51

The figures for the net circulation exclude the value of the notes held in the Reserve Treasuries. Those for the active circulation further exclude the value of notes in all other Government treasuries and also of notes held in the Head Offices of the Presidency Banks.

The Paper Currency Department made a profit of Rs. 1,52, lakhs during the year.

The Currency Reserve.—The currency reserve at the close of the financial year was made up of :—

Silver coin in India Rs. 10,40 lakhs.

Gold coin and bullion in India Rs. 26,85 lakhs.

Silver bullion under coinage Rs. 39 lakhs.

Gold coin and bullion in England Rs. 67 lakhs.

Securities Rs. 61,48 lakhs.

These securities were held in the following form :—

	Nominal Value.			Cost price.		
	Rs.	a.	p.	Rs.	a.	p.
IN RUPEE SECURITIES—						
3½ per cent. loan of 1842-43	8,15,95,000	0	0	8,00,00,000	0	0
3 per cent. loan of 1896-97	2,04,86,500	0	0	1,99,99,945	10	0
	10,20,81,500	0	0	9,99,99,945	10	0
	£	*s.*	*d.*	£	*s.*	*d.*
IN STERLING SECURITIES—						
2½ per cent. Consols	2,628,438	1	6	2,240,468	18	0
British Treasury Bills	32,777,000	0	0	32,078,782	12	9
	35,405,438	1	6	34,319,251	10	9
				= Rs. 61,47,88,773	1	0

THE GOLD STANDARD RESERVE.

The Gold Reserve Fund was first started in the beginning of 1901 when the profits which had accrued from the coinage of rupees from April 1900 amounting to £3 millions were credited to the fund, gradually remitted to England from time to time and there invested in sterling securities. In the following years the demand for rupees for trade requirements necessitated further heavy coinage and the investments held in the Gold Reserve Fund rapidly swelled by the credit of the profits and the interest thereon and amounted at the close of 1905-06 to £12½ millions. During the latter half of this year, abnormal trade activity resulted in an unprecedented demand for silver currency and necessitated exceptionally heavy coinage in a short space of time. To avoid the possibility of a recurrence of similar inconvenience, a separate silver branch of the Gold Reserve Fund was formed and was brought up to its proposed limit of rupees 6 crores (£4 millions) by March 1907; and after being for a short time known as the "Gold and Silver Reserve Fund" it was finally named the Gold Standard Reserve. At the close of 1906-07, the Reserve contained nearly £17 millions, of which £12½ millions were held in securities, £4 millions in rupees in India and the rest in gold in India and as a book credit. It is not necessary in this report to recount the events of the latter half of 1907-08. It will be sufficient to mention that the sale in India during the first half of 1908-09 of sterling bills on London resulted in the withdrawal from circulation in India of some Rs. 12 crores, the equivalent being withdrawn in gold by the Secretary of State from the Reserve in London, securities to the value of over £8 millions being put on the market. By November 1908, the silver in the Reserve in India had reached 18·65 crores. The subsequent improvement in trade conditions necessitated a portion of this silver being transferred to the Paper Currency Department to meet notes and frequent similar transfers continued to be made, the account being adjusted by a transfer in the opposite direction in London, made in gold from the Currency Reserve held there to the Gold Standard Reserve. By March 1911, the silver branch in India contained only 2·90 crores and the balance remained at this figure till September 1912, when the resumption of coinage made it possible gradually to increase it up to Rs. 6 crores, of which 4½ were held in Bombay.

Effects of the War.—The recommendations of the Currency Commission regarding the policy to be pursued towards the Gold Standard Reserve will be found explained in detail in the section Currency Commission (q. v.). Briefly, they were that the silver branch of the Reserve should be abolished, and the rupees in the Reserve transferred to the Paper Currency Reserve in exchange for an equivalent in gold; that a much larger gold holding, in liquid gold, should be aimed at; and that the Secretary of State should be prepared to sell sterling bills and telegraphic transfers on London, or Reverse Councils as they are sometimes called, on demand. Unfortunately the war broke out before there was time for this policy to be carried into effect so the emergency found the Reserve in a transition stage. The measures adopted were prompt and efficacious. The silver branch of the Reserve was abolished by transferring the rupees therein to the Paper Currency Reserve in exchange for an equivalent in sovereigns, so that the Reserve was composed entirely of gold and gold securities. After a brief interval, necessary to consult, the Secretary of State, who naturally had to colour his arrangements by the abnormal financial conditions prevailing in London, a notification was issued early in August 1914 to the effect that Government would be prepared to sell sterling bills and telegraphic transfers on London to the extent of a million sterling a week, at the following rates:—Bills 1-3-29 32d. and telegraphic transfers 1-3-27 32d. This at once steadied the exchanges.

As the war went on the movement was in precisely the opposite direction. As explained in the section dealing with the Paper Currency, the demand for rupees was insatiable; at the same time the price of silver continued to rise. Government declined to buy silver for coinage and to issue rupees at a loss, so on August 29th, 1917, the rate of exchange was raised to one shilling and five pence. Later very large silver purchases were made from the dollar reserve in the United States to meet the price which had to be paid for this on April 11th, 1918, the rate of exchange was raised to one shilling and six pence. At that figure it now stands.

The comparative failure of the rains in 1918, with the consequent cessation of the export of food grains from India, caused a mild disturbance in the exchange market, banks and firms, who had laid down funds in India to finance the export trade requiring to remit them to London. After an inexcusable delay the Government of India issued Sterling Bills, according to policy; the demand was soon satisfied and the need for rupees resumed.

The following statement shows the position of the Gold Standard Reserve at the close of the financial year. Under ordinary circumstances the very heavy coinage of rupees would have swelled the Reserve, for the profits on coining are credited to this fund. Owing to the high price of silver there is no profit on coining; therefore the only accretions to the fund arise from the interest on the investments

Details of the Gold Standard Reserve on 31st March, 1918:—

	£
In England—	
Estimated value on the 31st March 1918 of the Sterling Securities of the nominal value of £29,389,824 (as per details below)	28,452,943
Cash placed by the Secretary of State in Council at short notice	6,000,499
In India—	
Gold	*Nil.*
TOTAL ..	34,453,442

Details of investments:—

	Face value. £
Local Loans 3 per cent. Stock .	200,000
Guaranteed 2¾ per cent. Stock ..	438,720
Transvaal Government 3 per cent. Guaranteed Stock (1923—53)	1,092,023
Exchequer 6 per cent. Bonds ..	4,982,800
Exchequer 5 per cent. Bonds, 1922	2,008,300
,, ,, ,, 1921	139,800
Exchequer 3 per cent. Bonds ..	2,998,000
Canada 3¼ per cent. Bonds ..	161,000
New South Wales 3½ per cent. Stock	113,000
British Treasury Bills	13,494,000
National War Loan 5 per cent. .	3,762,181
TOTAL ..	29,389,824

GROSS REVENUE IN INDIA AND ENGLAND; IN £ (15 RUPEES=£1).

HEADS OF REVENUE.	1910–11.	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17.	1917–18 (Revised Estimate).
PRINCIPAL HEADS OF REVENUE:—	£	£	£	£	£	£	£	£
Land Revenue	20,877,521	20,764,697	21,282,468	21,391,575	21,221,539	22,031,161	22,041,265	22,191,100
Opium	7,521,962	5,961,278	5,124,592	1,624,878	1,572,218	1,913,514	3,160,005	3,068,500
Salt	3,175,950	3,391,212	3,334,374	3,445,305	3,910,790	3,647,587	4,82 ,260	5,432,800
Stamps	4,811,691	4,815,129	5,069,115	5,318,293	5,082,043	5,433,632	5,77 ,696	5,745,000
Excise	7,030,314	7,609,753	8,277,919	8,894,300	8,856,881	8,632,209	9,215,899	10,050,100
Provincial Rates	554,378	548,680	552,149	180,210	38,814	41,845	31,391	28,700
Customs	6,619,009	6,468,567	7,197,243	7,558,220	6,347,201	5,873,886	8,659,182	11,127,900
Assessed Taxes	1,593,301	1,652,878	1,742,397	1,950,250	2,036,733	2,090,109	3,772,967	6,075,800
Forest	1,829,557	1,952,179	2,153,009	2,229,872	1,980,652	2,074,128	2,470,795	2,681,400
Registration	425,855	445,832	482,022	518,962	485,295	518,879	540,581	533,400
Tributes from Native States	607,447	595,005	622,542	616,881	609,827	609,128	612,429	617,800
TOTAL	55,046,985	54,205,240	55,838,830	53,728,746	52,141,993	52,866,375	61,107,470	67,552,500
INTEREST	1,465,439	1,448,741	1,473,708	1,352,119	1,023,307	1,096,417	1,136,504	2,245,300
POST OFFICE	1,996,922	2,134,279	2,262,436	2,410,210	(a) 3,596,973	(a) 3,787,478	(a) 4,174,607	(a) 4,492,100
TELEGRAPH	997,159	1,087,425	1,174,124	1,188,309				
MINT	196,110	367,100	487,359	339,841	69,498	101,918	689,866	530,700
RECEIPTS BY CIVIL DEPARTMENTS:—								
Law and Justice:								
Courts of Law	310,663	323,660	352,051	373,791	404,568	413,545	414,799	435,100
Jails	237,791	253,354	270,062	288,448	296,534	290,225	345,725	388,600
Police	155,373	122,738	135,553	130,339	141,281	143,199	155,038	133,100
Ports and Pilotage	146,531	151,737	156,746	153,609	140,330	125,394	123,419	105,300
Education	183,636	205,610	226,126	247,905	266,250	295,036	298,278	322,300
Medical	63,697	66,847	82,505	80,388	84,768	91,327	84,128	93,300
Sanitation	....	....	....	....	....	....	31,667	33,100
Agriculture					163,217	78,465	91,111	107,000
Scientific and other Minor Departments	113,432	114,185	111,804	133,806	(b) 108,173	(b) 133,713	(b) 195,548	(b) 302,300
TOTAL	1,211,123	1,238,131	1,334,847	1,408,286	1,505,120	1,579,904	1,739,713	1,920,100
MISCELLANEOUS RECEIPTS:—								
Receipts in aid of Superannuation; &c.	195,489	201,470	200,386	206,810	213,235	213,927	219,865	214,000
Stationery and Printing	97,656	96,891	92,078	93,416	97,594	89,134	96,034	93,800
Exchange	70,084	105,697	100,879	119,741	1,729	74,254	111,371	1,000,300
Miscellaneous	314,662	409,018	371,864	352,612	365,192	302,173	420,260	1,292,100
TOTAL	677,891	813,076	765,207	772,579	677,750	679,488	847,530	2,599,900

(a) Posts and Telegraphs. (b) Scientific and Miscellaneous Departments.

GROSS REVENUE IN INDIA AND ENGLAND; IN £ (15 RUPEES=£1)—(*contd.*)

HEADS OF REVENUE.	1910–11.	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17.	1917–18 (Revised Estimate).
	£	£	£	£	£	£	£	£
RAILWAYS:								
State Railways (Gross Receipts)	30,629,756	33,579,129	36,686,364	37,546,135	36,105,167	38,176,193	41,964,600	45,607,200
Deduct—								
Working Expenses and Surplus Profits paid to Companies.	16,787,641	17,745,049	19,391,729	20,013,602	20,376,709	20,290,504	20,749,538	21,660,000
Net Receipts	13,842,115	15,834,080	17,294,635	17,532,533	15,728,458	17,885,689	21,215,062	23,947,200
Guaranteed Companies (Net Traffic Receipts) ..	..	..	3,980	..	..	..	..	..
Subsidized Companies (Government share of Surplus Profits and Repayment of Advances of Interest).	39,346	57,645	73,174	93,101	70,691	91,414	98,735	104,400
TOTAL	13,881,461	15,891,725	17,371,789	17,625,634	15,799,149	17,977,103	21,313,797	24,051,600
IRRIGATION:								
Major Works:								
Direct Receipts	2,288,051	2,381,533	2,607,478	2,765,966	2,758,490	2,737,991	3,011,227	3,015,800
Portion of Land Revenue due to Irrigation ..	1,178,005	1,351,465	1,538,245	1,684,374	1,667,864	1,773,720	1,827,108	1,859,200
Minor Works and Navigation	228,465	247,054	265,494	262,819	254,615	267,368	317,289	313,000
TOTAL	3,694,521	3,980,052	4,411,217	4,713,159	4,680,969	4,779,079	5,155,624	5,188,000
OTHER CIVIL PUBLIC WORKS	293,833	326,924	355,447	298,640	288,219	304,035	309,373	318,900
RECEIPTS BY MILITARY DEPARTMENT:								
Army:								
Effective	948,154	1,061,030	1,107,244	1,080,631	971,846	816,434	993,194	990,100
Non-effective	110,495	118,336	120,559	122,875	124,345	123,509	122,324	121,100
	1,058,649	1,179,366	1,227,803	1,203,506	1,096,191	939,943	1,115,518	1,111,200
Marine	91,787	84,900	87,669	89,542	198,115	223,263	365,027	301,000
Military Works	70,593	78,791	72,162	76,604	80,382	78,534	95,401	90,000
TOTAL	1,221,029	1,343,057	1,387,634	1,369,652	1,374,688	1,241,740	1,575,946	1,502,200
TOTAL REVENUE	80,682,473	82,835,750	86,862,598	85,207,175	81,157,666	84,413,537	98,050,430	110,401,300

The Currency Commission.

The Royal Commission on Indian Currency and Finance was appointed in April 1913, in order to inquire into certain questions arising out of the management of the Indian currency system and the control of Indian finance. For some years, and particularly since the American crisis of 1907, when the Indian currency system was severely tried, much criticism had been levelled against the manner in which the principles laid down by the Fowler Committee of 1898 had been developed, and against the extent to which Indian funds and reserves had been drawn to London. These criticisms were brought to a head when strong complaint was made in Parliament of the agency through which large purchases of silver were made for the Government of India in 1912.

It was to settle these issues that the Commission was appointed, and it took evidence throughout the latter part of the year 1913.

The Report.—The report was dated February 24th, 1914, some delay occurring through the necessity of referring it to Sir Henry Chalmers, who had taken up his post as Governor of Ceylon, and Sir Shapurji Broacha, who had been obliged to return to Bombay on account of the severe financial crisis consequent on the failure of certain of the swadeshi banks. The report was long and detailed, so the Commission furnished a summary of it, which condensed their opinions and recommendations in the following passages:—

1. The establishment of the exchange value of the rupee on a stable basis has been and is of the first importance to India.

2. The measures adopted for the maintenance of the exchange value of the rupee have been necessarily and rightly rather supplementary to, than in all respects directly in pursuance of, the recommendations of the Committee of 1898.

3. These measures worked well in the crisis of 1907-08, the only occasion upon which they have been severely tested hitherto.

4. The time has now arrived for a reconsideration of the ultimate goal of the Indian Currency system. The belief of the Committee of 1898 was that a Gold Currency in active circulation is an essential condition of the maintenance of the Gold Standard in India, but the history of the last 15 years shows that the Gold Standard has been firmly secured without this condition.

5. It would not be to India's advantage to encourage an increased use of gold in the internal circulation.

6. The people of India neither desire nor need any considerable amount of gold for circulation as currency, and the currency most generally suitable for the internal needs of India consists of rupees and notes.

7. A mint for the coinage of gold is not needed for purposes of currency or exchange, but if Indian sentiment genuinely demands it and the Government of India are prepared to incur the expense, there is no objection in principle to its establishment either from the Indian or from the Imperial standpoint: provided that the coin minted is the sovereign (or the half-sovereign); and it is pre-eminently a question in which Indian sentiment should prevail.

8. If a mint for the coinage of gold is not established, refined gold should be received at the Bombay Mint in exchange for currency.

9. The Government should continue to aim at giving the people the form of currency which they demand, whether rupees, notes or gold, but the use of notes should be encouraged.

10. The essential point is that this internal currency should be supported for exchange purposes by a thoroughly adequate reserve of gold and sterling.

11. No limit can at present be fixed to the amount up to which the Gold Standard Reserve should be accumulated.

12. The profits on coinage of rupees should for the present continue to be credited exclusively to the Reserve.

13. A much larger proportion of the Reserve should be held in actual gold. By an exchange of assets between this Reserve and the Paper Currency Reserve, a total of about £10,000,000 in gold can be at once secured. This total should be raised as opportunity offers to £15,000,000 and thereafter the authorities should aim at keeping one-half of the total Reserve in actual gold.

14. The Indian branch of the Gold Standard Reserve in which rupees are now held should be abolished, the rupees being handed over to the Paper Currency Reserve in exchange for gold.

15. The proper place for the location of the whole of the Gold Standard Reserve is London.

16. The Government should definitely undertake to sell bills in India on London at the rate of 1s. 3 29-32*d.* per rupee whenever called upon to do so.

17. The Paper Currency system of India should be made more elastic. The fiduciary portion of the note issue should be increased at once from 14 crores to 20 crores, and thereafter fixed at a maximum of the amount of notes held by Government in the Reserve Treasuries plus one-third of the net circulation, and the Government should take power to make temporary investments or loans from the fiduciary portion within this maximum in India and in London as an alternative to investment in permanent securities.

18. We recommend the immediate universalisation of the 500 rupee note and the increase of the facilities for the encashment of notes.

19. The aggregate balances in India and London in recent years have been unusually large. This has been due mainly, though not entirely, to accidental causes and to the exceptional prosperity of India.

20 Caution is justifiable in framing Budgets in India, but has been carried rather further than was necessary in recent years.

21. A change in the date of the commencement of the financial year from the 1st April to the 1st November or the 1st January would probably enable the Government of India to frame more accurate Budgets. Such a change would also enable the India Office to fix the amount of their borrowings in London with closer regard to immediate needs. We commend this proposal for favourable consideration.

22. The practice of transferring revenue surpluses to London to be used in avoiding or reducing fresh borrowings for capital expenditure has been thoroughly justified in the interest of India, and the Secretary of State has made good use, for this purpose or for actual reduction of debt, of the balances from time to time accumulated in his hands.

23. But the recommendations which we make as regards loans by Government in India may lead to a revision of the occasions, though not of the extent, of transfers of money to London.

24. The independent Treasury system of the Indian Government is not an ideal one. It is partly responsible for the stringency which recurs annually in the Indian money markets.

25. We recommend that the Government of India should make a regular practice of granting loans to the Presidency Banks from their surplus balances in India against security on terms to be negotiated with the Presidency Banks.

26. In deciding upon the location of surplus balances, the Government of India and the Secretary of State should act in consultation, and, while the transmission of the necessary funds to London at favourable rates of exchange is the first consideration, the authority should have regard to all the factors including the possibility of utilising surplus balances for loans in India.

27. In carrying out these recommendations, the authorities should proceed tentatively and with caution.

28. We recommend that the amount of the annual rupee loans in India should be increased as much as possible. The figures of recent loans appear to have been somewhat over cautious. We call attention to the questions of relaxing present regulations in regard to endorsements on rupee paper and of creating new forms of securities.

29. The Secretary of State sells Council Drafts, not for the convenience of trade, but to provide the funds needed in London to meet the requirements of the Secretary of State on India's behalf.

30. The India Office perhaps sold Council Drafts unnecessarily at very low rates on occasions when the London balance was in no need of replenishment, but we do not recommend any restrictions upon the absolute discretion of the Secretary of State as to the amount of drafts sold or the rate at which they are sold, provided that it is within the gold points. The amount and occasion of sales should be fixed with reference to the urgency of the Government's requirements and the rate of exchange obtainable, whether the drafts are against Treasury balances or against the Reserves.

31. There has been some excess of caution in the renewal of debt by the India Office during recent years.

32. The system of placing portions of the India Office balance out on short loan with approved borrowers in the city of London is on the whole well managed, but we draw attention to—

(*a*) The term for which loans are made.

(*b*) The desirability of giving greater publicity to the methods by which admission is gained to the list of approved borrowers.

(*c*) Some defects in the list of approved securities and especially its narrow range.

33. There is no ground for the suggestion that the City members of the Secretary of State's Council showed any kind of favouritism in placing on deposit with certain banks, with the directorates of which they were connected, a part of the India Office balance at a time when it was too large to be placed entirely with the approved borrowers. But we call the attention of the Secretary of State to the desirability of avoiding as far as possible all occasion for such criticism though it may be founded on prejudice and ignorance of the facts.

34. We observe that in our opinion the time has come for a general review of the relations of the India Office to the Bank of England.

35. The working of the present arrangements for the remuneration of the Secretary of State's broker should be watched, and if necessary they should be revised.

36. We record our high opinion of the way in which the permanent staff, both in India and in London, have performed the complicated and difficult financial duties placed upon them.

37 We recommend a continuance of a Finance Committee of Council as providing the machinery most suitable for the work required

38. The Finance Committee should, if possible, contain three members with financial experience, representing—

(*a*) Indian Official Finance.

(*b*) Indian Banking and Commerce.

(*c*) The London Money Market.

In any case there should be at least one member with Indian financial experience. The absence of any representative of Indian finance on the Committee since 1911 has resulted in giving undue prominence to the representation of London City experience.

39. While we suggest that the changes recently proposed and now under discussion in the constitution of the India Council may require some modification in order to provide for the continuance of a Finance Committee of Council, we are in sympathy with the desire for expediting financial business, which is one of the objects in view.

40. The present arrangement under which the Assistant Under Secretary of State, having financial experience, is able to share with the Financial Secretary the responsibility for financial business in the India Office has many advantages. For the future we recommend that either (1). the Under Secretary or Assistant Under Secretary of State should have financial experience as at present, or (2) there should be two Assistant Under Secretaries, of whom one should have financial experience.

41. We are not in a position to report either for or against the establishment of a State or Central Bank, but we regard the subject as one which deserves early and careful consideration, and suggests the appointment of a small expert committee to examine the whole question in India, and either to pronounce against the proposal or to work out in full detail a concrete scheme capable of immediate adoption.

A Note of Dissent.—The report was signed by Sir James Begbie subject to a note of dissent. In this he pointed out that the currency policy directed to the attainment of stability in the exchange value of the rupee by means of gold reserves collected from the profits realised on the coinage of rupees had brought into existence an extensive token currency, which was not a desirable form of currency for a country which absorbs gold on a very large scale. Sir James Begbie therefore held the view.

" That the true line of advance for the currency policy is to discourage an extension of the token currency by providing increased facilities for the distribution of gold when further increases in the currency become necessary. These greater facilities should, I consider, include the issue of gold coins from an Indian mint of a value more suitable for general currency use than the sovereign and half-sovereign, for the purpose of assisting the distribution of gold when, as is frequently the case, the balance of trade is strong in India's favour and gold arrives in considerable quantities. I also think that supplies of gold coins should be laid down in the up-country districts with the object of giving the general public effective opportunities of obtaining gold coins.

Action on the report as a whole has been deferred until after the termination of the war—indeed it is doubtful if any sort of general pronouncement will be made on the report, because of the great changes effected by the war—partial action has been taken in order to meet immediate necessities. Thus in 1914 the silver branch of the Gold Standard Reserve was abolished, the rupees held in that reserve being exchanged for an equivalent in gold taken from the Paper Currency Reserve. The Gold Standard Reserve—it is sometimes called the Gold Reserve Fund—now consists entirely of gold and gold securities. In 1914 a Notification was issued guaranteeing to issue sterling drafts on the Secretary of State in London—these are called for convenience Reverse Councils—at gold export point on demand. The extent of this demand will be found in the section dealing with the Paper Currency and the Gold Standard Reserve (see ante). Another important step was taken by the Secretary of State when he announced that he had exchanged the Consol holding in the Gold Standard Reserve for the new four and a half per cent. loan. The official communique said:—"the Secretary of State has converted the entire holdings of Consols in the Gold Standard Reserve amounting to £3,266,391 into stock of the new war loan to the value of £2,177,594. This has been done partly by the acquisition of conversion rights from the public and to a smaller extent by a direct tender for the new loan." In the autumn of 1914, when there seemed to be every likelihood of a complete break in the price of cotton unless special steps were taken to enable holders to carry the crop, the Government of India stiffened the money market by offering the Presidency Banks loans from the Paper Currency Reserve in order to assist in the financing of threatened trades. This help was not needed, because cotton recovered its value with surprising celerity, and there has been a surplus, rather than a deficiency of money. The invested portion of the Paper Currency Reserve has been increased. The question of a State Bank is in abeyance. When the scheme was first mooted its reception was generally hostile. It was impossible to see how the interests of the three Presidency Banks and of the large Joint Stock and Exchange Banks could be reconciled with a great State institution. Since then there has been a certain revulsion of feeling, though opinion is still nicely divided, and there are many who, whilst not hostile to a State Bank *per se*, are inclined to think that Government can be of more assistance in time of crisis by remaining outside banking and placing its resources at the disposal of the market through the Presidency Banks in time of pressure.

The Railways.

The history of Indian Railways very closely reflects the financial vicissitudes of the country. Not for some time after the establishment of Railways in England was their construction in India contemplated, and then to test their applicability to Eastern conditions three experimental lines were sanctioned in 1845. These were from Calcutta to Raniganj (120 miles), the East Indian Railway; Bombay to Kalyan (33) miles. Great Indian Peninsula Railway; and Madras to Arkonam (39 miles), Madras Railway. Indian Railway building on a serious scale dates from Lord Dalhousie's great minute of 1853, wherein, after dwelling upon the great social, political and commercial advantages of connecting the chief cities by rail, he suggested a great scheme of trunk lines linking the Presidencies with each other and the inland regions with the principal ports. This reasoning commended itself to the Directors of the East India Company, and it was powerfully reinforced when, during the Mutiny, the barriers imposed on free communication were severely felt. As there was no private capital in India available for railway construction, English Companies, the interest on whose capital was guaranteed by the State, were formed for the purpose. By the end of 1859 contracts had been entered into with eight companies for the construction of 5,000 miles of line, involving a guaranteed capital of £52 millions. These companies were (1) The East Indian; (2) the Great Indian Peninsula; (3) the Madras; (4) the Bombay, Baroda and Central India; (5) the Eastern Bengal; (6) the Indian Branch, now the Oudh and Rohilkund State Railway; (7) the Sind, Punjab and Delhi, now merged in the North Western State Railway; (8) the Great Southern of India, now the South Indian Railway. The scheme laid the foundations of the Indian Railway system as it exists to-day.

Early Disappointments.

The main principle in the formation of these companies was a Government guarantee on their capital, for this was the only condition on which investors would come forward. This guarantee was five per cent. coupled with the free grant of all the land required; in return the companies were required to share the surplus profits with the Government, after the guaranteed interest had been met; the interest charges were calculated at 22d. to the rupee; the Railways were to be sold to Government on fixed terms at the close of twenty-five years and the Government were to exercise close control over expenditure and working. The early results were disappointing. Whilst the Railways greatly increased the efficiency of the administration, the mobility of the troops, the trade of the country, and the movement of the population, they failed to make profits sufficient to meet the guaranteed interest. Some critics attributed this to the unnecessarily high standard of construction adopted, and to the engineers' ignorance of local conditions: the result was that by 1869 the deficit on the Railway budget was Rs. 166½ lakhs. Seeking for some more economical method of construction, the Government secured sanction to the building of lines by direct State Agency, and funds were allotted for the purpose, the metre gauge being adopted for cheapness. Funds soon lapsed and the money available had to be diverted to converting the Sind and Punjab lines from metre to broad-gauge for strategic reasons. Government had therefore again to resort to the system of guarantee, and the Indian Midland (1882-85), since absorbed by the Great Indian Peninsula; the Bengal-Nagpur (1883-87), the Southern Maratha (1882), and the Assam-Bengal (1891) were constructed under guarantees, but on easier terms than the first companies. Their total length was over 4,000 miles.

Famine and Frontiers.

In 1879, embarrassed by famine and by the fall of the exchange value of the rupee, Government again endeavoured to enlist unaided private enterprise. Four companies were promoted:—the Nilgiri, the Delhi-Umballa-Kalka, the Bengal Central, and the Bengal North-Western. The first became bankrupt; the second and third received guarantees, and the Tirhut Railway had to be leased to the fourth. A step of even greater importance was taken when Native States were invited to undertake construction in their own territories, and the Nizam's Government guaranteed the interest on 330 miles of line in the State of Hyderabad. This was the first of the large system of Native State Railways. In the first period up to 1870, 4,255 miles were opened, of which all save 45 were on the broad gauge; during the next ten years there were opened 4,239, making the total 8,494 (on the broad gauge 6,562, the metre 1,865, and narrow 67). Then ensued a period of financial ease. It was broken by the fall in exchange and the costly lines built on the frontier. The Penjdeh incident, which brought Great Britain and Russia to the verge of war, necessitated the connection of our outposts at Quetta and Chaman with the main trunk lines. The sections through the desolate Harnai and Bolan Passes were enormously costly; it is said that they might have been ballasted with rupees; the long tunnel under the Khojak Pass added largely to this necessary, but unprofitable outlay.

Rebate Terms Established.

This induced the fourth period—the system of rebates. Instead of a gold subsidy, companies were offered a rebate on the gross earnings of the traffic interchanged with the main line, so that the dividend might rise to four per cent. but the rebate was limited to 20 per cent. of the gross earnings. Under these conditions, there were promoted the Ahmedabad-Prantej, the South Behar, and the Southern Punjab, although only in the case of the first were the terms strictly adhered to. The Barsi Light Railway, on the two feet six inches gauge, entered the field without any guarantee, and with rolling stock designed to illustrate the carrying power of this gauge. The rebate terms being found unattractive in view of the competition of 4 per cent. trustee stocks, they were revised in 1896 to provide for an

absolute guarantee of 3 per cent. with a share of surplus profits, or rebate up to the full extent of the main line's net earnings in supplement of their own net earnings, the total being limited to 3½ per cent. on the capital outlay. Under these terms, a considerable number of feeder line companies was promoted, though in none were the conditions arbitrarily exacted. As these terms did not at first attain their purpose, they were further revised, and in lieu was substituted an increase in the rate of guarantee from 3 to 3½ per cent. and of rebate from 3½ to 5 per cent. with equal division of surplus profits over 5 per cent. in both cases. At last the requirements of the market were met, and there has since been a mild boom in feeder railway construction and the stock of all the sound companies promoted stands at a substantial premium.

Railway Profits Commence.

Meantime a much more important change was in progress. The gradual economic development of the country vastly increased the traffic, both passenger and goods. The falling in of the original contracts allowed Government to renew them on more favourable terms. The development of irrigation in the Punjab and Sind transformed the North-Western State Railway. Owing to the burden of maintaining the unprofitable Frontier lines, this was the Cinderella Railway in India—the scapegoat of the critics who protested against the unwisdom of constructing railways from borrowed capital. But with the completion of the Chenab and Jhelum Canals, the North-Western became one of the great grain lines of the world, choked with traffic at certain seasons of the year and making a large profit for the State. In 1900 the railways for the first time showed a small gain to the State. In succeeding years the net receipts grew rapidly. In the four years ended 1907-08 they averaged close upon £2 millions a year. In the following year there was a relapse. Bad harvests in India, accompanied by the monetary panic caused by the American financial crisis, led to a great falling off in receipts just when working expenses were rising, owing to the general increase in prices. Instead of a profit, there was a deficit of £1,240,000 in the railway accounts for 1908-09. But in the following year there was a reversion to a profit, and the net Railway gain has steadily increased. For the year ended March 1917 this gain amounted to £ 7,482,314. Although in a country like India, where the finances are mainly dependent upon the character of the monsoon, the railway revenue must fluctuate, there is no reason to anticipate a further deficit. but every ground for hoping that the railway profits will fill the vacuum in the Indian revenues caused by the cessation of the opium trade with China.

Contracts Revised.

A very important factor in this changed position is the revision of the original contracts under which the guaranteed lines were constructed. The five per cent. dividend, guaranteed at 22*d.* per rupee, and the half-yearly settlements made these companies a drain on the State at a time when their stock was at a high premium. The first contract to fall in was the East Indian, the great line connecting Calcutta with Delhi and the Northern provinces. When the contract lapsed, the Government exercised their right of purchasing the line, paying the purchase-money in the form of terminable annuities, derived from revenue, carrying with them a sinking fund for the redemption of capital. The railway thus became a State line; but it was released to the Company which actually works it. Under these new conditions the East Indian Company brought to the State in the ten years ended 1909, after meeting all charges, including the payments on account of the terminable annuity by means of which the purchase of the line was made, and interest on all capital outlay subsequent to the date of purchase, a clear profit of nearly ten millions. At the end of seventy-four years from 1880, when the annuity expires, the Government will come into receipt of a clear yearly income of upwards of £2,700,000, equivalent to the creation of a capital of sixty to seventy millions sterling. No other railway shows results quite equal to the East Indian, because in addition to serving a rich country by an easy line, it possesses its own collieries and enjoys cheap coal. But with allowance for these factors, all the other guaranteed companies which have been acquired under similar conditions as their contracts expired, have proportionately swelled the revenue and assets of the State. It is difficult to estimate the amount which must be added to the capital debt of the Indian railways in order to counterbalance the loss during the period when the revenue did not meet the interest charges. According to one estimate it should be £50 millions. But even if that figure be taken. Government have a magnificent asset in their railway property.

Improving Open Lines.

These changes induced a corresponding change in Indian Railway policy. Up to 1900 the great work had been the provision of trunk lines. But with the completion of the Nagda-Muttra line, providing an alternative broad gauge route from Bombay to Delhi through Eastern Rajputana, the trunk system was virtually complete. A direct broad gauge route from Bombay to Sind is needed, but chiefly for strategic purposes. The poor commercial prospects of the line and the opposition of the Rao of Cutch to any through line in his territories, keep this scheme in the background. There does not exist any through rail connection between India and Burma, although several routes have been surveyed: the mountainous character of the region to be traversed, and the easy means of communication with Burma by sea, rob this scheme of any living importance. Further Survey work was undertaken in November 1914, the three routes to be surveyed being the coast route, the Manipur route, and the Hukong valley route. The metre gauge systems of Northern and Southern India must also be connected and Karachi given direct broad-gauge connection with Delhi, a project that is now under investigation. But these works are subordinate to the necessity for bringing the open lines up to their traffic requirements and providing them with feeders. The sudden

increase in the trade of India found the main lines totally unprepared. Costly works were necessary to double lines, improve the equipment, provide new and better yards and terminal facilities and to increase the rolling stock. Consequently the demands on the open lines have altogether overshadowed the provision of new lines. Even then the railway budget was found totally inadequate for the purpose, and a small Committee sat in London, under the chairmanship of Lord Inchcape, to consider ways and means. This Committee found that the amount which could be remuneratively spent on railway construction in India was limited only by the capacity of the money market. They fixed the annual allotment at £12,000,000 a year. Even this reduced sum cannot always be provided.

Government Control.

As the original contracts carried a definite Government guarantee of interest, it was necessary for Government to exercise strong supervision and control over the expenditure during construction, and over management and expenditure after the lines were open for traffic. For these purposes a staff of Consulting Engineers was formed, and a whole system of checks and counterchecks established, leading up to the Railway Branch of the Public Works Department of the Government of India. As traffic developed, the Indian Railways outgrew this dry nursing, and when the original contracts expired, and the interests of Government and the Companies synchronised, it became not only vexatious but unnecessary. Accordingly in 1901-02 Mr. Thomas Robertson was deputed by the Secretary of State to examine the whole question of the organisation and working of the Indian Railways, and he recommended that the existing system should be replaced by a Railway Board, consisting of a Chairman and two members with a Secretary. The Board was formally constituted in March 1905. The Board is outside, but subordinate to the Government of India in which it is represented by the Department of Commerce and Industry. It prepares the railway programme of expenditure and considers the greater questions of policy and economy affecting all the lines. Its administrative duties include the construction of new lines by State agency, the carrying out of new works on open lines, the improvement of railway management with regard both to economy and public convenience, the arrangements for through traffic, the settlement of disputes between lines, the control and promotion of the staff on State lines, and the general supervision over the working and expenditure of the Company's lines. Two minor changes have taken place since the constitution of the Railway Board. In 1908, to meet the complaint that the Board was subjected to excessive control by the Department of Commerce and Industry, the powers of the Chairman were increased and he was given the status of a Secretary to Government with the right of independent access to the Viceroy; he usually sits in the Imperial Legislative Council as the representative of the Railway interest. In 1912 in consequence of complaints of the excessive interference of the Board with the Companies, an informal mission was undertaken by Lord Inchcape to reconcile differences. The constitution of the Board is now undergoing further inquiry, and the development generally favoured in the establishment of a Railway Member of the Viceroy's Executive Council.

Management.

The Railways managed by Companies have Boards of Directors in London. They are represented in India by an Agent, who has under him a Traffic Manager, a Chief Engineer, a Locomotive Superintendent, a Storekeeper, a Police Superintendent, (who is appointed by Government), and an Auditor. The State Railways are similarly organised.

Clearing House.

Proposals have several times been made for the establishment of a Clearing House but the distances are too great. The work which would ordinarily be done by the Clearing House is done by the Audit Office of each Railway.

The Railway Conference.

In order to facilitate the adjustment of domestic questions, the Railway Conference was instituted in 1876. This Conference was consolidated into a permanent body in 1903 under the title of the Indian Railway Conference Association. It is under the direct control of the railways, it elects a President from amongst the members, and it has done much useful work.

The Indian Gauges.

The standard gauge for India is five feet six inches. When construction was started the broad gauge school was strong, and it was thought advisable to have a broad gauge in order to resist the influence of cyclones. But in 1870, when the State system was adopted it was decided to find a more economical gauge, for the open lines had cost £17,000 a mile. After much deliberation, the metre gauge of 3 feet 3⅜ inches was adopted, because at that time the idea of adopting the metric system for India was in the air. The original intention was to make the metre gauge lines provisional; they were to be converted into broad gauge as soon as the traffic justified it; consequently they were built very light. But the traffic expanded with surprising rapidity, and it was found cheaper to improve the carrying power of the metre gauge lines than to convert them to the broad gauge. So, except in the Indus Valley, where the strategic situation demanded an unbroken gauge, the metre gauge lines were improved and they become a permanent feature in the railway system. Now there is a great metre gauge system north of the Ganges connected with the Rajputana lines and Kathiawar. Another System in Southern India embracing the Southern Maratha and the South India Systems. These are not yet connected, but the necessary link from Khandwa by way of the Nizam's Hyderabad-Godaveri Railway, cannot be long delayed. All the Burma lines are on the metre gauge. Since the opening of the Barsi line, illustrating the capacity of the two feet six inch gauge, there has been developed a tendency to construct feeders on this rather than on the metre gauge.

STATISTICAL POSITION.

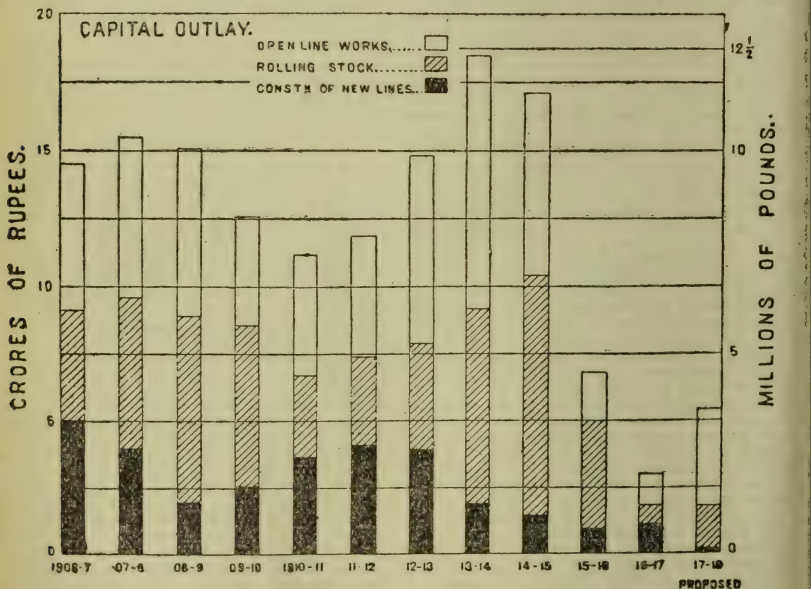
This Administration Report of the Railways in India for the year 1916-17 dealt with the second complete year during the whole of which war conditions have prevailed. The reduced scale of expenditure both under Capital and Revenue Renewals which formed a feature of the previous year's programme was again reflected in the figures. Owing to the extraordinary demand for railway materials in the different theatres of war and the consequent diversion of supplies on which railway works in India are still largely dependent, it is inevitable that a great part of the necessary renewals and improvements on all lines must continue to be deferred till normal conditions supervene. The figures of gross earnings on the other hand again show an increase mainly due to the heavy military and coal traffic.

Capital.—The Capital outlay incurred by the Government in the purchase and construction of its railways, including the liability which remains to be discharged by means of Annuity and Sinking Fund payments, amounted at the end of 1916-17 to £366,647,001.

The outlay incurred during 1916-17 was £ 1,980,428 distributed as follows:—

	Rs.
Open Line Works including suspense	1,13,69,415
Rolling-stock	72,04,000
New Lines	1,11,33,000
Total ..	2,97,06,415
Equivalent at Rs. 15=£ 1 to	£1,980,428

The following diagram shows graphically how these figures compare with those of past years. The distribution of the grant of £ 3·6 millions (Rs. 5·40 lakhs) which has been sanctioned for the financial year 1917-18 is also added for purposes of comparison:—



During the year the actual capital expenditure fell short of the sanctioned grant for the year by Rs. 153 lakhs. This lapse was due mainly to the difficulties attendant on the supply of railway materials from England.

The capital expenditure sanctioned for 1917-18 is £3·6 millions. This is an advance on the 1916-17 programme which amounted to £3 millions only, but the severe restriction of expenditure in the last two years has caused a large number of works to be deferred which have become most necessary and the urgency of which is increasing as time goes on. It has, therefore, become necessary to provide for a slightly more liberal programme than in 1916-17. Funds have not been allotted for the commencement of any new line of railway, and the bulk of the expenditure proposed to be incurred is on open lines.

The actual capital outlay on railways which have been financed by private enterprise, such as Branch lines promoted by Companies, District Board Lines, Native State Lines, etc., amounted at the end of 1916-17 to Rs. 66,80,79,000. The capital expenditure on such lines during the year was as follows :—

	Rs.
Branch Line Companies' Railways.	1,63,40,000
District Board Lines	20,40,000
Native State Lines	63,64,000
Total ..	2,47,44,000

Results of Working.

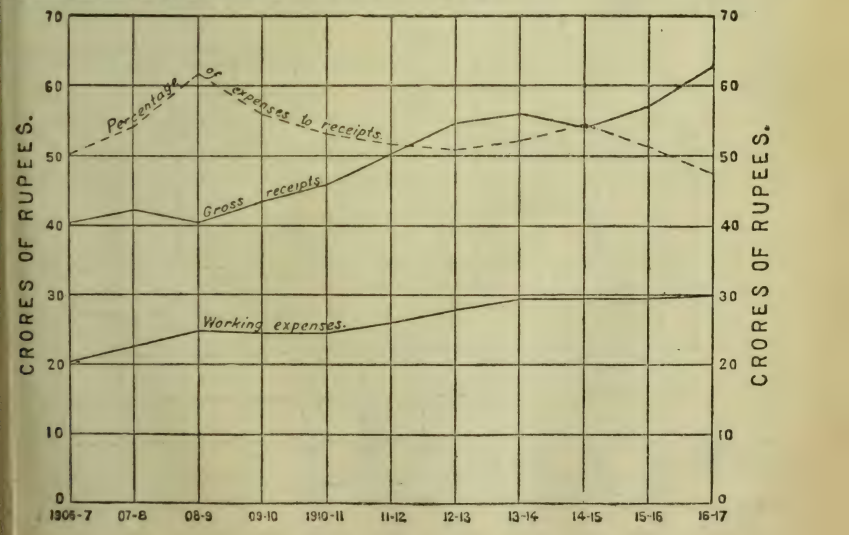
The following table compares the financial results attained in the working of the State Railways during the year 1916-17 with those of previous years (in the case of money the figures are shown in thousands) :—

	1911-12.	191 -13.	1913-14.	1914-15.	1915-16.	6-17.
	£	£	£	£	£	£
Capital at charge at end of each year	331,247	340,103	351,302	361,560	364,858	365,483
REVENUE.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Gross traffic receipts—State Railways.	50,36,87	55,02,95	56,31,92	54,15,78	57,26,43	62,94,69
Deduct—Working Expenses	25,89,46	28,02,31	29,35,91	29,52,87	29,53,00	29,96,86
NET RECEIPTS.	24,47,41	27,00,64	26,96,01	24,62,91	27,73,43	32,97,83
Equivalent in sterling Rs. 15=£ 1 ..	£ 16,316	£ 18,004	£ 17,973	£ 16,419	£ 18,489	£ 21,986
Percentage of return on capital at charge	4·93	5·29	5·12	4·54	5·06	6·02

The net working profit from State Railways, after meeting interest and other miscellaneous charges, amounted in the year 1916-17 to £7,482,314. It would have been more, had it not been that in accordance with instructions of the Secretary of State for India certain Annuity and Sinking Fund payments which really go to the discharge of debt are included in the Railway Revenue Account.

Revenue and Expenditure.

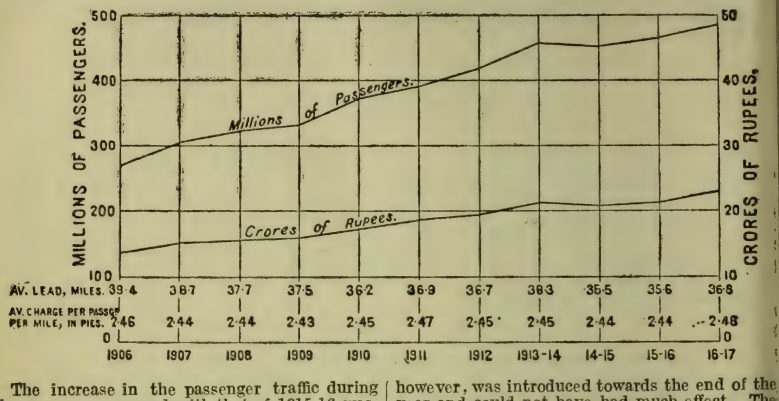
The revenue expenditure and gross receipts of the State lines worked by the State and Companies for the past eleven years are compared in the following diagram :—



The working expenses during the year 1916-17 amounted to Rs. 29·97 crores or only 44 lakhs more than the actual working expenses iof1915-16. This result is remarkable seeing that the receipts of the year exceeded those of 1915-16 by over 5½ crores. It was due to the increasing difficulty of obtaining railway material from England in consequence of which repairs and renewals of permanent way and rolling-stock have been restricted.

Passenger Earnings.

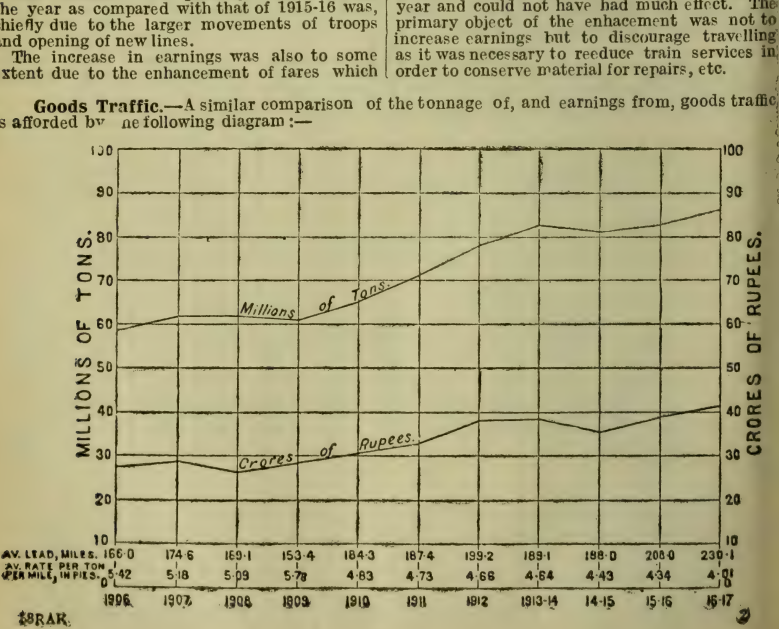
The numbers of passengers carried and the earnings therefrom on all Indian railways are compared below :—



The increase in the passenger traffic during the year as compared with that of 1915-16 was, chiefly due to the larger movements of troops and opening of new lines.

The increase in earnings was also to some extent due to the enhancement of fares which however, was introduced towards the end of the year and could not have had much effect. The primary object of the enhacement was not to increase earnings but to discourage travelling as it was necessary to reeduce train services in order to conserve material for repairs, etc.

Goods Traffic.—A similar comparison of the tonnage of, and earnings from, goods traffic is afforded by the following diagram :—



The better results of the year are attributable to the larger movement of military stores, opening of new lines and to the heavier bookings of coal and wheat.

The decrease in the average rate earned per ton per mile is due to the longer average lead over which traffic was conveyed, and to the fact that coal, which formed the bulk of this long lead traffic is charged at a very low-average rate.

The gross earnings of railways other than State lines, such as District Boards' lines, Native State lines, etc., during 1916-17 amounted to Rs. 783·37 lakhs, as compared with Rs. 729·85 lakhs in 1915-16, being an increase of Rs. 53,52 lakhs, and as the working expenses were more only by Rs. 19·61 lakhs than the previous year, the net earnings rose from Rs. 369.32 lakhs to Rs. 403·23 lakhs in 1916-17, or an increase of Rs. 33·91 lakhs. These net earnings yielded a return on the Capital outlay (Rs. 6,305·54 lakhs) on open lines, that is on mileage earning revenue of 6·39 per cent. as against 6·08 per cent. in 1915-16.

Mileage.—During the year 1916-17, 467·98 miles of railway were opened to traffic, bringing the total mileage open (after allowing for minor corrections due to realignments, etc.) up to 36,286 miles. The additional mileage was made up as follows —

	5′-6″ gauge.	3′-3⅜″ gauge.	2′-6″ gauge.	2′-0″ gauge.	Total.
	Miles.	Miles.	Miles.	Miles.	Miles.
State lines worked by the State	8·88	..	46·48	..	55·36
State lines worked by Companies	45·26	3·20	..	51·10	99·56
Branch line Companies' railway under guarantee terms, worked by the Branch line Companies	..	..	42·69	..	42·69
Branch line Companies' railway under rebate terms, worked by the Branch line Companies	..	..	7·58	..	7·58
Branch line Companies' raiways under rebate terms, worked by the man line.	31·6	..	..	..	31·68
Branch line Companies' railways under guarantee and rebate terms	..	31·25	..	..	31·25
Companies' lines subsidized by the Government of India	14·76	..	..	..	14·76
Native State lines worked by Native States ..	..	11·69	38·52	..	50·21
Native State lines worked by the main line ..	25·90	102·49	..	..	128·39
Companies' lines guaranteed by Native States .	..	..	6·50	..	6·50
TOTAL ..	126·48	148·63	141·77	51·10	467·98

Ten years' Progress.—The progress made during the past of ten years is summarised in the following table—

Gauge.	MILEAGE OPEN AT THE END OF									
	1907.	1908	1909.	1910.	1911.	1912	1913-14.	1914-15.	1915-16.	1916-17
5′-6″ ..	15,821	15,951	16,309	16.701	17,016	17,189	17641	17,827	18,060	18,182
3′-3⅜″ ..	12,613	12,863	13,323	13,530	13,759	14,165	14,389	14,552	14.671	14,806
2′-6″ ..	1,234	1,394	1,443	1,436	1,632	1,692	2,174	2,402	2,539	2,683
2′-0″ ..	342	368	415	432	432	438	452	504	563	615
TOTAL ..	30,010	30 576	31,190	32,099	32,839	33,484	34,656	35,285	35,833	36,286

The mileage of new construction sanctioned during the year was 222·45 miles of which 115 miles were to be financed by Government and had to be undertaken for purely military purposes. The remaining mileage was almost all under the heading of Native State lines.

Construction Programme—The total mileage under construction or sanctioned for construction, at the close of the year was :—

	5′-6″ gauge.	3′-3¾″ gauge.	2′-6″ gauge.	2′-0″ gauge.	Total.
	Miles.	Miles.	Miles.	Miles.	Miles.
State lines worked by the State	115·00	..	..	..	115·00
State lines worked by Companies	377·61	36·54	8·43	..	422·58
Branch line Companies' railways under guarantee terms, worked by the Branch line Companies	..	..	120·33	..	120·33
Branch line Companies' railways under guarantee terms, worked by the main line	..	74·11	8·30	..	82·41
Branch line Companies' railways under rebate terms, worked by the main line	33·30	..	191·06	..	224·36
Branch line Companies' railways under guarantee and rebate terms	..	69·48	..	..	69·48
Companies' lines subsidized by the Government of India	..	5.31	19·50	..	24·81
Unassisted Companies' lines	..	..	27·20	..	27·20
District Board lines	3·86	91·69	..	..	95·55
Native State lines worked by Native States	..	481·41	23·75	14·72	519·88
Native State lines worked by the main line	..	205.14	171·81	..	376·95
Companies' lines guaranteed by Native States	..	..	3·50	..	3·50
TOTAL	529·77	963·68	573·88	14·72	2,082·05

An examination of the statement of new mileage opened shows that only one-third of this was on lines financed by Government, and it may be mentioned that work on these lengths constructed out of Govenment funds had been in progress before the commencement of the war. As to the table showing the total mileage under construction or sanctioned it should be explained that on most of the new lines comprised in this statement work is either held entirely in abeyance or can only be proceeded with very slowly as financial considerations and the limitations in the supply of essential materials permit; in fact the principal activity (and that is very limited) is under lines financed by Branch Line Companies and Native States. The following paragraphs show the position on some of the more important projects.

Branch Line Companies.—The Branch Line Terms underwent no change during the year. They provide for the grant by the Government of India of financial assistance to private companies furnishing capital for the construction of feeder lines to existing railways in either of the following terms :—

1. A firm guarantee by Government of a return of 3½ per cent. on the paid up share capital of the Branch Line Company.

2. A rebate paid by the parent line from its net earnings from traffic brought to it by the branch, sufficient to make up a dividend of 5 per cent. on the paid up share capital; the liability of the main line being, however, limited to the total of its net earnings from such traffic.

The option is allowed to Companies, under certain circumstances, of raising a portion of their capital under guarantee terms and the remainder under rebate terms. Advantage was recently taken of this option by the Mymensingh-Bhairab Bazaar Railway Company, floated with an authorized capital of Rs. 86 lakhs of which Rs. 23 lakhs were raised under rebate terms and the balance under a guarantee.

In the province of Assam, on account of the relatively less developed state of the country and the difficulty experienced in obtaining capital for private railway enterprises under the ordinary terms, it has been provided that the Local Administration may in approved cases supplement the Imperial guarantee of 3½ per cent. described above by the grant from provincial funds of an additional guarantee for a specified term of years of 1 per cent. on the paid up capital of the Company

The table below shows the projects sanctioned for construction under the Branch Line Terms during the year under review. The fall in their number as compared with previous years, is entirely due to causes directly connected with the war. Conditions in the money market had become unfavourable for the raising of capital on reasonable terms, while increases in the cost of manufactured materials, such as rails and rolling-stock, led to large increases in estimates for construction. For these reasons, the Government of India found it necessary towards the end of July 1916, to prohibit altogether the raising of capital for Branch Line Projects, except under the most special circumstances. It was recognised, however, that this prohibition would have to be relaxed in the case of railways already under construction and of new projects, considered to be of sufficient urgency for commercial or other reasons to be undertaken in spite of the unfavourable circumstances mentioned. The railways shown in the table therefore fall under one or other of these two classes.

Name of railway.	Gauge.	Length.	Capital subscribed.	Financial assistance.	Working Agency.	PROMOTERS.
			Rs. (in lakhs.)			
Arakan Light ..	2′ 6″	18·50	22·00	Guarantee.	Arakan Light Railway Company.	Messrs. Martin and Company.
Panposh-Raipura ..	5′ 6″	14·30	15·00	Rebate ..	Bengal-Nagpur Railway.	Bisra Lime Stone Company.
Teesta-Kurigram conversion.	3′ 3⅜″	14·85	7·00	Rebate ..	Eastern Bengal Railway.	Messrs. Apte, Joshi and Company.

With a view to the resumption, on the return of normal conditions, of a full programme of railway construction, the Railway Board decided to proceed with negotiations with Branch Line promoters in connection with projects which were already under consideration, up to the stage short of actual flotation of the new companies. In accordance with this policy, concessions have been granted for the construction, under the Branch Line Terms Resolution, of the Trichinopoly-Pudukkottai Railway, 32 miles, the Shahdara-Narowal extension, 48 miles, of the Sialkot-Narowal Railway, and the Kurigram-Chilmari extension, 21 miles, of the Teesta-Kurigram Railway. A concession has also recently been offered to a Bombay promoter for the construction of the Phaphund-Auriya Railway, 13 miles, and negotiations are in progress in connection with a number of schemes in all parts of India, covering an aggregate mileage of 3,747 and involving a total capital expenditure of close upon 15 millions sterling.

District Board enterprise in the Madras Presidency has also been affected by the difficulty in obtaining materials and the restrictions on the raising of capital referred to above. An arrangement had been come to, under which District Boards were permitted to borrow from the Presidency Bank; and not only was it found necessary to cancel this arrangement but owing to the prohibitive prices of railway materials, those Boards, which had funds in hand as a result of their cess accumulations were unable to embark on new railway enterprises. As a result of these conditions, concession for the construction of only one District Board railway, the Repali-Viseswaram extension of the Tenali-Repali Railway, was granted during the year; but the Guntur District Board, decided to defer its construction until the cost of materials fell to a normal level. For the same reasons it was decided to postpone the construction of the Manamadura-Sivaganga, Mayavaram-Tranquebar and Tinnevelly Tiruchendur Railways, sanctioned during 1915-16.

The Madras Presidency still stands alone in this form of local enterprise, no other province having so far enacted legislation for the levy of a railway cess. The bill to empower District Boards to levy a railway cess which was stated in the last report to have been introduced in the Legislative Council of the Punjab was withdrawn in September 1916 owing to lack of support. The desirability of introducing legislation in this behalf has, however, been recognised elsewhere, and it may be expected that when the war is over, other provinces may find it possible to follow the lead given by Madras.

The progress of new construction in Native States continues to suffer from the restrictions arising out of lack of funds caused by the large contributions, direct and indirect, which the Native States have made to the Imperial resources for the conduct of the war. An extension of the Jaipur-Reengus-Sikar Railway from Sikar to Jhunjnu and the Bhoyani Road-Bechraji Railway in the Jaipur and Baroda States aggregating 61·15 miles of new construction on the metre-gauge were, however, sanctioned. The following table gives a complete list of

railways which were under construction in Native States during the year:—

	Length in miles.
Baroda State.	
1. Bodeli-Chhota Udaipur (2′ 6″ gauge)	22·65
2. Bhoyani Road-Bechraji (metre gauge)	21·30
3. Masor Road-Jambusar (2′ 6″ gauge)	6·07
4. Motipura-Tankhala (2′ 6″ gauge)	26·29
5. Okhamanda (metre gauge)	37·02
6. Samlaya-Timba (2′ 6″ gauge)	33·34
7. Unai-Kalamba (2′ 6″ gauge)	8·66
Bhavnagar.	
Savar Kundla-Mahuva with branch to Port Albert Victor (metre gauge)	54·30
Cutch.	
Anjar-Bachau (2′ 6″ gauge)	23·75
Hyderabad.	
Wanaparti Road-Gadwal (metre gauge)	13·45
Jaipur.	
1. Reengus-Sikar (metre gauge)	30·97
2. Sikar-Jhunjnu (metre gauge)	39·85
Junagad.	
Veraval-Una (metre gauge)	56·91
Mysore.	
1. Lakvalli-Narasimharajapura (2′ 0″ gauge)	14·72
2. Mysore-Arsikere (metre gauge)	102·25
Rajpipla State.	
Nandod-Nandod Town (2′ 6″ gauge)	1·74
Travancore.	
Quilon-Trivandrum (metre gauge)	37·91

Amongst the Native States which now own property in the shape of railways are:—

Baroda, Hyderabad, Bhavnagar, Gondal, Porbandar, Jodhpur, Bhopal, Patiala, Morvi, Junagad, Kashmir, Kolhapur, Rajkot, Jetpur, Mysore, Cooch Behar, Gwalior, Mewar, Kotah, Navanagar, Rajpipla, Bikaner, Dhrangadra, Parlakimedi, Cambay, Maler Kotla, Jind, Cochin, Travancore, Cutch, Jaipur, Mourbhanj, Sangli, Dholpur, and Bahawalpur. The order in which these names are given represents approximately the sequence in which the different States first began to interest themselves in schemes of railway extension.

The total mileage of railways in Natives States open to traffic at the close of the year was 4,826 miles distributed between the various gauges as under:—

	Miles.
5′ 6″ gauge	960·23
3′ 3½″ gauge	3,059·06
2′ 6″ gauge	519·23
2′ 0″ gauge	287·09

Accidents.—The total number of persons of all classes killed by causes beyond their control was 70 against 38, in 1915-16, the increase being partly due to the large number of persons killed in the accident at Kalanour station on the North-Western Railway referred to below and to minor accidents; the number injured amounted to 424 against 237 in the previous year, the increase being chiefly attributable to a larger number of persons being injured in minor accidents. Out of a total of 486 millions of passengers travelling 244 were killed and 1,099 injured, while of the former only 15 were killed through causes beyond their own control.

Employes.—The total number of servants in railway employ at the close of the year was 636,488 of which number 6,907 were Europeans, 10,425 Anglo-Indians and 619,156 Indians. Of the Europeans and Anglo-Indians 15,311 were enrolled as Volunteers. At the close of 1916-17 there were 11,384 children and 10,413 apprentices and workmen attending the Railway Schools.

War and Railways.—In addition to the very heavy traffic out of war conditions the Indian Railways had to meet several other military requirements. A considerable number of officers and men volunteered for military duty. This threw a very heavy burden on the remaining members of the staff, and the traffic was handled only by the zeal and devotion of these officers. The development of operations in Mesopotamia, East Africa and Palestine made heavy drafts on the Indian railways, which were met by the despatch of material of all kinds. With the increasing output of the munition works in the United Kingdom the demand on India for shells ceased, and this branch of the work was closed in December 1916. But the demand for hospital trains, rail motors, and other equipment was incessant. The diversion of coal from the sea to the rail route, owing to the shortage of tonnage, added enormously to the volume of traffic; and it was met only by the most strenuous activity. Then the difficulty of obtaining railway material from home compelled the Indian lines to economise their rolling stock. A large number of passenger trains was discontinued; all concessions were cancelled; and fares were raised. A small surcharge was also levied on goods. An important development was the final trials in the use of oil fuel, in order to economise the coal supply; these were successful and oil fuel is now largely used in the Karachi section of the North-Western railway, and it is intended to extend its use elsewhere in zones which can be served by sea from the wells of the Anglo-Persian Oil Company on the Karun.

THE CHIEF RAILWAYS IN INDIA.

The Assam-Bengal Railway, which is constructed on the metre gauge, starts from Chittagong and runs through Surma Valley across the North Cachar Hills into Assam. It is worked under a limited guarantee by a company whose contract is terminable in 1921. The main line has an open mileage of 854·37. The total capital outlay is Rs. 1,666 lakhs, gross earnings 67 lakhs, net earnings, 14 lakhs and the percentage of net earnings on the capital outlay 0·89. The loss to the State for 1916-17 was Rs. 36,59,988.

Bengal and North-Western.

The Bengal and North-Western Railway was constructed on the metre gauge system by a company without any Government assistance other than free land and was opened to traffic

1885. The system was begun in 1874 as ie Tirhut State Railway. In 1890 this line as leased by Government to the Bengal nd North-Western Railway. Since then ex-nsive additions have been made in both ctions. It is connected with the Rajputana etre gauge system at Cawnpore and with ie Eastern Bengal State Railway at Khati-ar and the Oudh and Rohilkhand Railway Benares. The open mileage is 2,053 73. he total capital outlay amounts to Rs. 9·88 khs, gross earnings 118 lakhs, net earnings s. 69 lakhs and interest divided between ie Government and Company Rs. 60 khs; percentage of total net income on pital outlay 7·36. Tirhut railway: Total pital outlay Rs. 873 lakhs, gross earnings s. 93 lakhs, net earnings Rs. 56 lakhs, in to the State Rs. 24 lakhs, and percentage ·91.

Bengal-Nagpur.

The Bengal-Nagpur Railway was commenced a metre gauge from Nagpur to Chhatis-rh in the Central Provinces in 1887. A mpany was formed under a guarantee which ok over the line, converted it to the broad uge and extended it to Howrah, Cuttack and atni. In 1901 a part of the East Coast State ilway from Cuttack to Vizagapatam was ansferred to it and in the same year nction was given for an extension to the al fields and for a connection with the Branch the East Indian Railway at Hariharpur. pen mileage 2,795·18; under construction sanctioned 327·64; total 3,122·82. The tal capital outlay is Rs 4,099 lakhs, gross rnings Rs. 512 lakhs, net earnings 265 khs, percentage of net earnings on capital tlay is 6·49 The gain to the State is 98 lakhs.

Bombay Baroda.

The Bombay, Baroda and Central India ilway is one of the original guaranteed ilways. It was commenced from Surat *via* aroda to Ahmedabad, but was subsequently tended to Bombay. The original contract as terminable in 1880, but the period was tended to 1905; and then renewed under vised conditions. In 1885 the Rajputana alwa metre gauge system of State railways as leased to the Company and has since been corporated in it On the opening of the agda-Muttra, giving broad gauge connec-on through Eastern Rajputana with Delhi e working was entrusted to this Company. n the acquisition of the Company in April 07 the purchase price was fixed at £11,685,581, ie statistical working of the broad gauge ows a mileage of 997·12, the capital outlay 518 lakhs, gross earnings 396 lakhs, net rnings 233 lakhs, percentage of net earnings the capital outlay 9·28; gain to the ate 108 lakhs.

The metre gauge system of the Company ows a mileage of 1,821·61 ; total capital tlay 1,713 lakhs, gross earnings 342 lakhs, t earnings, 190 lakhs; percentage of net rnings on the capital outlay 11·12 ; gain to e State 135 lakhs.

Burma Railways.

The Burma Railway is an isolated line, and hough various routes have been surveyed ere is little prospect of its being connected with the Railway system of India on account of the difficult and sparsely populated country which intervenes. It was commenced as a State Railway and transferred in 1896 to a Company under a guarantee. The mileage is 1,598·46, total capital outlay Rs. 1,791 lakhs, gross earnings 223 lakhs, net earnings 108 lakhs; percentage of net earnings on the capital outlay 6·05, gain to the State 31·84 lakhs. Burma extensions have a total mileage of 290·86.

Eastern Bengal.

The Eastern Bengal State Railway was promoted under the original form of guarantee and was constructed on the broad gauge. The first portion of the line running to Calcutta over the Ganges was opened in 1862. In 1874 sanction was granted for the construction on the metre gauge of the Northern Bengal State Railway, which ran from the north bank of the Ganges to the foot of the Himalayas on the way to Darjeeling. These two portions of the line were amalgamated in 1884 into one State Railway. The open mileage is 1,770·13, capital total outlay 3,629 lakhs, gross earnings 369 lakhs, net earnings 168 lakhs, percentage of net earnings on capital outlay 4·68 Gain to the State Rs. 33 lakhs.

The East Indian.

The East Indian Railway is one of the three railways sanctioned for construction as experimental lines under the old form of guarantee. The first section from Howrah to Pandua was opened in 1854 and at the time of the Mutiny ran as far as Raniganj. It gives the only direct access to the port of Calcutta from Northern India and is consequently fed by all the large railway systems connected with it. In 1880 the Government purchased the line, paying the shareholders by annuities, but leased it again to the company to work under a contract which is terminable in 1919. The open mileage is 2,806·75 under construction or sanction 5·55, total 2,812·30. Total capital outlay (on 2,495 miles) Rs. 7,211 lakhs, gross earnings 1,108 lakhs, net earnings Rs. 710 lakhs; percentage of net earnings on capital outlay 9·85; gain to the State 303 lakhs.

Great Indian Peninsula.

The Great Indian Peninsula Railway is the earliest line undertaken in India. It was promoted by a Company under a guarantee of 5 per cent. and the first section from Bombay to Thana was open for traffic in 1853. Sanction was given for the extension of this line *via* Poona to Raichur, where it connects with the Madras Railway, and to Jubbulpore where it meets the East Indian Railway. The feature of the line is the passage of the Western Ghats, these sections being 15¼ miles on the Bhore Ghat and 9¼ miles on the Thul Ghat which rise 1,131 and 972 feet. In 1900, the contract with the Government terminated and under an arrangement with the Indian Midland Railway that line was amalgamated and leased to a Company to work. The open mileage is 3,265·66, under construction or sanction 162·23; total 3,428·79. The total capital outlay on the Company's own system of 2,551·71 miles is 6,577 lakhs, gross earnings, 974 lakhs, net

earnings 450 lakhs; percentage of net earnings on capital outlay 6·84; gain to the State 81 lakhs.

Madras Railway.

The Madras Railway was the third of the original railways constructed as experimental lines under the old form of guarantee. It was projected to run in a north-westerly direction in connection with the Great Indian Peninsula Railway and in a south-westerly direction to Calicut. On the expiry of the contract in 1907 the line was amalgamated with the Southern Mahratta Railway Company, a system on the metre gauge built to meet the famine conditions in the Southern Mahratta Country and released to a large Company called the Madras and Southern Mahratta Railway Company. The mileage is 3,169·01. The capital outlay on the Company's broad gauge system of 1047·61 miles is 1,880 lakhs; gross earnings 298; net 150; percentage 802; metre-gauge-mileage 2,567·21; capital outlay 3,261 lakhs; gross earnings 464 lakhs; net 227 lakhs: percentage 6·98; gain to the State 10 lakhs; annuity payment 73 lakhs.

The North-Western.

The North-Western State Railway began its existence at the Sind-Punjab-Delhi Railway, which was promoted by a Company under the original form of guarantee and extended to Delhi, Multan and Lahore and from Karachi to Kotri. The interval between Kotri and Multan was unbridged and the railway traffic was exchanged by a ferry service. In 1871-72 sanction was given for the connection of this by the Indus Valley State Railways and at the same time the Punjab Northern State Railway from Lahore towards Peshawar was begun. In 1886 the Sind-Punjab-Delhi Railway was acquired by the State and amalgamated with these two railways under the name of the North-Western State Railway. It is the longest railway in India under one administration. The opened mileage is 5485·13, under construction or sanction 209·45, total 5694·58. The statistical results of the working of the State owned 40·57 miles are total outlay Rs. 8·737 lakhs, gross earnings 983 lakhs, net earnings 510 lakhs, percentage of earnings on capital outlay 5·86; gain to the State 174 lakhs.

Oudh and Rohilkhand.

Oudh and Rohilkhand Railway was another of the lines constructed under the original form of guarantee. It began from the north bank of the Ganges running through Rohilkhand as far as Saharanpur where it joins the North-Western State Railway. It was not until 1887 that the bridge over the Ganges was completed and connected with the East Indian Railway. To effect a connection between the metre gauge systems to the North and those to the South of the Ganges, a third rail was laid between Bhuriwal and Cawnpore. The Company's contract expired in 1889 when the Railway was purchased by the State and has since been worked as a State Railway. The opened mileage is 1,638·91. The total capital outlay on the State system of 1,606 miles is 2,152 lakhs, gross earnings 263 lakhs, net earnings 150 lakhs, percentage of net earnings on capital outlay 6·99, gain to the State was 60 lakhs.

The South-Indian.

The South Indian Railway was one of the original guaranteed railways. It was begun by the Great Southern India Railway Company as a broad gauge line; but was converted after the seventies to the metre gauge. This line has been extended and now serves the whole of the Southern India, south of the south-west line of the Madras Railway. Between Tuticorin and Ceylon a ferry service was formerly maintained, but a new and more direct route to Ceylon *via* Rameshwaram was opened at the beginning of 1914. As the original contract ended in 1907, a new contract was entered upon with the Company on the 1st of January 1908. The open mileage is 1,787·86, under construction or sanction 165·46, total 1,953·32. The statistical results of the working of the Company's system of 1,455·17 miles gives a capital outlay, 1,878 lakhs, gross earnings 323 lakhs, net earnings 162 lakhs, percentage of net earnings to capital outlay of 8·64; gain to the State 92 lakhs.

The Native States.

The principal Native State Railways are: The Nizam's, constructed by a company under a guarantee from the Hyderabad State; the Kathiawar system of railways, constructed by subscriptions, among the several Chiefs in Kathiawar; the Jodhpur-Bikaner Railway, constructed by the Jodhpur and Bikaner Chiefs; the system of railways in the Punjab constructed by the Patiala, Jind, Maler Kotla, and Kashmir Chiefs; and the railways in Mysore constructed by the Mysore State.

INDIA AND CEYLON.

The possibility of connecting India and Ceylon by a railway across the bank of sand extending the whole way from Rameswaram to Mannar has been reported on from time to time, since 1895 various schemes having been suggested.

The South Indian Railway having been extended to Dhanushkodi, the southernmost point of Rameswaram Island, and the Ceylon Government Railway to Talaimannar, on Mannar Island, two points distant from each other about 21 miles across a narrow and shallow strait, the project has again been investigated with the idea of connecting these two terminal stations by a railway constructed on a solid embankment raised on the sand bank known as "Adam's Bridge", to supersede the ferry steamer service which has been established between these two points.

In 1913, a detailed survey was made by the South Indian Railway Company, and a project has now been prepared. This project contemplates the construction of a causeway from Dhanushkodi Point on the Indian side to Talaimannar Point on the Ceylon side, a length of

20.05 miles of which 7.19 will be upon the dry land of the various lands, and 12.86 will be in water. The sections on dry land will consist of low banks of sand pitched with coral and present no difficulty. The section through the sea will be carried on a causeway which it is proposed to construct in the following way. A double row of reinforced concrete piles, pitched at 10 feet centres and having their inner faces 14 feet apart, will first be driven into the sand. These piles will then be braced together longitudinally with light concrete arches and chains and transversely with concrete ties, struts and chains. Behind the piles slabs of reinforced concrete will be slipped in to position, the bottom slabs being sunk well into the sand of the sea bottom. Lastly, the space enclosed by the slabs will be filled in with sand.

The top of the concrete work will be carried to six feet above high water level, and the rails will be laid at that level. The sinking of the piles and slabs will be done by means of water jets. This causeway, it is expected, will cause the suspended sand brought up by the currents, to settle on either side bringing about rapid accretion and eventually making one big island of Rameswaram island and Mannar island.

If this method of construction is adopted, it is estimated that the total cost of the causeway and works at the two terminal points, *viz*:— Dhanushkodi and Talaimannar will be approximately 111 lakhs.

Indo-Burma Connection.

The raids of the Emden in the Bay of Bengal in 1914, and the temporary interruption of communications between India and Burma, stimulated the demand for a direct railway connection between India and Burma. Government accepted the position and appointed Mr. Richards, M. Inst. C.E., to be the engineer-in-charge of the surveys to determine the best route for a railway from India to Burma. The coast route appears to be the favoured one. This would start from Chittagong, which is the terminus and head-quarters of the Assam-Bengal Railway and a seaport for the produce of Assam. The route runs southwards through the Chittagong district, a land of fertile rice fields intersected by big rivers and tidal creeks and it crosses the Indo-Burma frontier, 94 miles from the town of Chittagong. For about 160 miles further it chiefly runs through the fertile rice lands of Arrakan and crosses all the big tidal rivers of the Akyab delta. These include the Kalidan river which drains 4,700 miles of country and even at a distance of about 30 miles from its mouth is more than half a mile wide. About 260 miles from Chittagong the railway would run into the region of mangrove swamps which fringe the seacoast north and south of the harbour of Kaukkphu stretching out into the mangrove swamps like ribs from the backbone. Innumerable spurs of the Arrakan Yoma have to be crossed. Yoma is a mountain ridge which extends from Cape Negrais northwards until it loses itself in a mass of tangled hills east of Akyab and Chittagong. At its southern end the height of the ridge is insignificant but it has peaks as high as 4,000 feet before it reaches the altitude of Sandway and further north it rises much higher. It is a formidable obstacle to railway communication between India and Burma This route is estimated to cost about £7,000,000 and would have to be supplemented by branch lines to Akyab where there is at present a considerable rice traffic and the cost of this would have to be added to the £7,000,000 already referred to.

The other routes examined have been the Hukong Valley route and the Manipur route which were surveyed by the late Mr. R. A. Way many years ago. The Manipur route is estimated to cost about £5,000,000 as it has to cross three main ranges of hills with summit levels of 2,650, 3,600 and 8,900 feet long. Altogether there would be about four miles of tunnelling through the three main ridges and through other hills and more than 100 miles of expensive undulating railway with grades as steep as 1 in 50 and 11,000 feet of aggregate rise and fall. The Hukong valley route seems to be the cheapest one as it is estimated to cost £3,500,000. This line is only about 284 miles long and it presents fewer engineering difficulties than either the Coast or the Manipur route. One hundred and fifty miles of this route lie in open country capable of cultivation though at present it is only very thinly populated. Only one range of hills has to be crossed and this can be negotiated with a summit tunnel of 5,000 feet long at a height of 2,500 feet. There are less than fifty miles of very heavy work and only about 4,500ft. aggregate of rise and fall.

It is understood that the construction of this line will constitute one of the first changes on the Railway Budget when normal conditions are restored.

Main results of working of all Indian Railways treated as one system.

—	Particulars.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.
1	Mileage open at close of the calendar year .. .. Miles	31,490	32,099	32,839	33,484	34,652	35,285	35,833	36,286
2	Total Capital outlay, including ferries and suspense, on open lines (in thousands of rupees) .. Rs.	4,29,83,20	4,39,04,73	4,50,06,80	4,65,15,00	4,95,08,64	5,19,22,13	5,29,93,29	5,35,27,97
3	Gross earnings (in thousands of rupees) .. .. ,,	47,06,38	51,14,22	55,27,92	61,65,07	63,58,56	60,42,01	64,66,04	70,68,42
4	Gross earnings per mile open .. ,,	14,948	15,936	16,833	18,412	18,350	17,123	18,041	19,480
5	Gross earnings per mile open per week .. .. ,,	287	306	324	354	353	329	347	375
6	Gross earnings per train-mile .. ,,	3·67	3·85	3·87	4·04	4·07	3·84	4·07	4·32
7	Total working expenses (in thousands of rupees).. .. .. ,,	26,38,48	27,15,72	28,83,92	30,15,92	32,93,04	32,74,10	32,91,95	33,40,32
8	Working expenses per mile open . ,,	8,380	8,462	8,782	9,007	9,504	92,79	9,185	9,206
9	Working expenses per train-mile.. ,,	·06	2·04	2·02	1·98	2·11	2·08	2·07	2·04
10	Percentage of working expenses to gross earnings .. Per cent.	·06	53·10	52·17	48·92	51·79	54·19	50·91	47·26
11	Net earnings (in thousands of rupees) .. .. Rs.	20,67,90	23,98,50	26,44,00	31,49,15	30,65,52	27,67,91	31.74,09	37,28,10
12	Net earnings per mile open .. ,,	6,568	7,474	8,051	9,405	8,846	7,844	8,856	10,274
13	Net earnings per train-mile .. ,,	1·61	1·81	1·85	2·06	1·96	1·76	2·00	2·28
14	Percentage of net earnings on total capital outlay (item 2)... Per cent.	4·81	5·46	5·87	6·77	6·19	5·33	5·99	6·96
15	Coaching train-miles (in thousands) .. .. .. Train-miles	48,191	48,598	50,833	52,093	55,972	58,569	56,364	55,719

Main results of working of all Indian Railways treated as one system—*contd.*

—	Particulars.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.
16	Goods train-miles (in thousands) Train-Miles	44,065	47,690	53,219	59,992	57,933	56,359	62,766	68,083
17	Mixed train-miles (in thousands).. ,,	30,859	31,986	33,746	34,940	34,581	35,514	34,471	34,874
18	Total, including miscellaneous train-miles (in thousands) .. ,,	128,260	132,823	142,944	152,761	156,276	157,142	159,038	163,604
19	Unit-mileage of passengers (in thousands) .. .. Unit-miles	12,364,579	13,432,477	14,372,943	15,318,872	16,614,088	16,022,849	16,528,646	17,846,064
20	Freight ton-mileage of goods (in thousands) .. .. Ton-miles	9,340,441	12,092,916	13,358,264	15,628,595	15,623,235	15,225,957	17,157,841	19,825,901
21	Average miles a ton of goods was carried .. .. Miles	153·37	184·33	187·44	199·15	182·11	188·04	207·98	230·08
22	Average rate charged for carrying a ton of goods one mile .. Pies	5·78	4·83	4·73	4·66	4·64	4·43	4·34	4·01
	Average miles a passenger was carried.								
23	1st class .. .. Miles	103·35	99·72	111·60	106·54	112·46	123·88	113·18	126·60
24	2nd class .. .. ,,	69·24	75·07	76·33	74·77	74·58	80·04	93·44	106·88
25	Intermediate class.. .. .. ,,	54·89	52·41	57·27	51·90	51·13	49·72	50·20	52·17
26	3rd class .. .. ,,	38·74	37·12	37·72	37·81	37·40	36·59	36·60	37·56
27	Season and Vendors' tickets .. ,,	8·89	8·79	8·78	8·64	8·71	8·50	8·52	8·46
28	Total .. .. ,,	37·54	36·15	36·87	36·72	36·30	35·52	35·59	36·82
	Average rate charged per passenger per mile.								
29	1st class .. .. Pies	12·89	14·55	14·29	14·25	14·48	12·79	13·68	13·32
30	2nd class .. .. ,,	5·94	6·67	6·73	6·64	6·60	6·23	5·50	5·07
31	Intermediate class.. .. .. ,,	3·06	3·15	3·10	3·12	3·14	3·16	3·16	3·14
32	3rd class .. .. ,,	2·28	2·28	2·30	2·30	2·29	2·29	2·29	2·32
33	Season and Vendors' tickets .. ,,	1·42	1·42	1·43	1·45	1·42	1·42	1·42	1·43
34	Total .. .. ,,	2·43	2·45	2·47	2·45	2·45	2·44	2·44	2·48

§ Mileage of Railway Lines in India open for Traffic at end of year.

Railways.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.
STATE LINES.										
Agra Delhi Chord*	126	126	126	126	126	126	126	126	126	126
Assam-Bengal*	775	775	771	790	790	805	812	848	808	823
Baran-Kotah*	..	14	40	40	40	40	40	40	40	40
Bengal-Nagpur*	1,734	1,774	1,791	1,808	1,852	1,852	1,877	1,877	1,889	1,889
Bezwada Extension*	21	21	21	21	21	21	21	21	21	21
Bhopal-Itarsi*	13	13	13	13	12	12	12	12	12	12
Bombay, Baroda & Central India*	504	504	504	504	504	2,762	2,812	2,812	2,818	2,818
Broach-Jambusar *	..	..	..	..	..	..	..	30	30	30
Burma*	1,475	1,527	1,527	1,527	1,527	1,529	1,529	1,529	1,529	1,529
Cawnpore-Banda *	..	..	..	..	..	..	33	76	76	76
Cawnpore-Burhwal	80	80	80	80	80	80	80	80	80	80
Dhone-Kurnool*	..	..	32	32	32	32	32	32	32	32
East Indian*	2,208	2,213	2,212	2,213	2,266	2,331	2,424	2,446	2,448	2,495
Eastern Bengal	1,274	1,274	1,503	1,508	1,510	1,570	1,581	1,639	1,639	1,628
Gondia-Chanda*	..	148	153	183	181	181	216	216	217	217
Great Indian Peninsula*	1,562	1,599	1,599	1,606	2,420	2,419	2,484	2,500	2,554	2,562
Indian Midland*	810	813	813	813	‡	‡	‡	‡	‡	‡
Jakhal-Hissar *	..	..	..	..	..	..	51	50	50	..
Jodhpur-Hyderabad*	124	124	124	124	124	124	124	124	124	124
Jorhat Provincial State	32	32	32	30	32	32	32	32	32	32
Jubbulpore-Gondia*	250	250	275	275	275	276	311	312	312	312
Kalka-Simla	59	59	60	60	60	60	60	60	60	60
Kohat-Thal	92	62	62	62	62	62	62	62	62	62
Lucknow-Bareilly*	237	237	237	237	258	296	298	313	313	313
Madras and Southern Mahratta*	2,647	2,543	2,546	2,553	2,553	2,553	2,553	2,552	2,568	2,567
Morappur-Dharmapuri*	19	19	19	19	19	19	74	(*a*) 74	(*a*) 74	(*a*) 73
Mysore*	296	296	296	296	296	296	296	296	296	290
Nagda-Muttra*	101	137	339	339	339	..	..	..	..	..
Nagpur Chhindwara*	..	..	..	..	51	51	98	94	94	97
Total	..	..	..	..	..	..	..	..	..	..

* Worked by a Company. † Amalgamated with Eastern Bengal Railway. ‡ Now worked by Great Indian Peninsula Railway.
§ These are the latest figures published in 1917. (*a*) Now called Morappur-Hosur.

Open for Traffic at end of year—*contd.*

Railways.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.
STATE LINES—*contd.*										
Nilgiri*	17	29	29	29	29	29	29	29	29	29
North-Western	3,430	3,463	3,568	3,570	3,656	3,650	3,710	3,709	3,758	3,761
Nowshera-Durgai	40	40	40	40	40	40	40	40	40	40
Oudh and Rohilkhand	1,223	1,223	1,231	1,327	1,434	1,524	1,525	1,526	1,527	1,527
Palanpur-Deesa*	17	17	17	17	17	17	17	17	17	17
Purulia-Ranchi*	72	72	73	73	73	73	115	115	115	115
Rair-Dhamtari*	57	57	57	57	57	57	57	57	57	57
Rajputtana-Malwa*	1,778	1,778	1,778	1,778	1,778	†	†	†	†	†
South Indian*	1,207	1,323	1,323	1,323	1,323	1,323	1,326	1,327	1,327	1,327
Southern Shan States	..	..	..	..	..	16	23	70	70	70
Tinnevelly-Quilon*	50	50	50	50	50	50	50	50	50	50
Tirhoot*	764	775	775	776	769	792	788	788	826	812
Tirupattur-Krishnagiri*	25	25	25	25	25	25	25	25	25	25
Trans Indus (Kalabagh-Bannu) *	..	..	..	..	..	..	89	89	89	135
Tumsar-Tirodi Light *	..	..	..	..	..	..	..	..	..	51
ASSISTED COMPANIES.										
Ahmedabad-Dholka	33	33	33	33	33	33	34	34	34	34
Ahmedabad-Parantij	55	55	55	55	89	89	89	89	89	89
Amritsar-Patti	28	28	28	54	54	54	54	54	54	54
Arrah-Sasaram Light	..	..	..	..	61	61	60	65	65	65
Bakhtiarpur-Behar Light	18	18	28	28	33	33	33	33	33	33
Bankura-Damoodar River	..	..	..	..	..	..	..	..	..	43
Baraset-Basirhat Light	26	26	35	51	51	51	51	52	52	52
Barsi Light	79	79	79	79	116	116	116	116	117	117
Bengal and North Western	1,015	1,017	1,092	1,117	1,176	1,177	1,240	1,239	1,241	1,241
Bengal Dooars	153	153	153	153	153	153	153	153	153	153
Bezwada-Masulipatam *	..	49	52	52	52	52	52	52	52	52
Bowringpet-Kolar	..	..	..	..	..	..	11	(*a*)	(*a*)	(*a*)
Total	..	..	..	..	..	..	..	..	..	..

* Worked by a Company.
‡ These are the latest figures published in 1917.

† Amalgamated with Bombay, Baroda and Central India Railway.
(*a*) Shown under Native State lines against Kolar District Railway.

‡ Mileage of Railway Lines in India open for Traffic at end of year—*contd.*

Railways.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.
ASSISTED COMPANIES—*contd.*										
Burdwan Katwa	..	..	..	..	..	..	..	..	33	33
Champaner-Shivrajpur Light	..	..	..	..	..	..	..	..	25	32
Darjeeling-Himalayan	51	51	51	51	20	20	20	26	25	32
,, ,, Extension	51	51	51	51	51	51	51	51	51	51
	..	..	..	..	..	..	14	54	95	95
Delhi-Umballa-Kalka	162	162	162	192	192	192	192	192	192	206
Dehri-Rohtas Light	..	..	..	..	..	..	..	24	24	24
Deoghur	5	5	5	5	†	†	†	†	†	†
Dhond-Baramati*	..	..	..	..	..	..	..	27	27	27
Dibru-Sadiya	78	78	78	86	86	86	86	86	86	86
Ellichpur-Yeotmal*	..	..	..	..	..	..	48	67	117	118
Godhra-Lunavada	..	..	..	..	..	..	24	25	25	25
Hardwar-Dehra	32	32	32	32	32	32	32	32	32	32
Howrah-Amta	37	44	44	44	44	44	44	44	44	44
Howrah-Sheakhala	20	20	20	20	20	20	20	20	20	20
Jacobabad-Kashmar*	..	..	..	..	..	..	..	77	77	77
Jessore-Jhenidah	..	..	..	..	..	..	37	37	37	37
Jullundar Doab	..	..	..	..	..	28	103	133	130	130
Jullundur-Mukerian *	..	..	..	..	..	..	..	45	45	45
Mandra-Bhaun *	..	..	..	..	..	..	..	..	46	46
Matheran Light *	13	13	13	13	13	13	13	13	13	13
Mirpur Khas-Jhudo	..	..	50	50	50	50	50	50	50	50
Mirpur Khas-Khadro *	..	..	..	..	..	50	50	50	50	50
Mymensing-Bhairab Bazar	..	..	..	..	..	..	..	..	..	31
Mymensingh-Jamulpur-Jagannathganj	54	54	54	55	55	55	55	55	54	56
Nadiad-Kapadvanj	..	..	..	..	..	..	28	28	28	28
Phagwara-Rahon *	..	..	..	..	..	..	..	..	26	26
Podanur Pallachi *	..	..	..	..	..	..	..	..	25	25
Powayen Light	40	40	40	40	40	40	40	40	40	39
Total	..	..	..	..	..	..	..	..	..	..

* Worked by a Company.

† Amalgamated with East Indian Railway.
‡ These are the latest figures published in 1917.

‡ Mileage of Railway Lines in India open for Traffic at end of year—*contd.*

Railways.	1907.	1908.	1909.	1910.	1911.	1912.	1913 14	1914–15.	1915–16.	1916–17.
ASSISTED COMPANIES—*concld.*										
Rohilkhand and Kumaon	171	203	202	202	225	256	256	256	259	259
Sara-Sirajganj *	..	..	..	..	..	..	..	..	22	53
Shahdara (Delhi) Saharanpur Light	93	93	93	93	93	93	93	93	93	93
Sialkot Narowal *	..	..	..	..	..	..	..	..	38	38
South Behar	79	79	79	79	79	79	79	79	79	79
Southern Punjab	575	575	575	576	576	576	576	576	576	577
Sutlej Valley	..	..	..	209	209	209	208	208	208	208
Tanjore District Board*	103	103	103	103	103	103	103	112	112	112
Tapti Valley	155	155	155	155	155	155	155	155	155	156
Tarkessur	22	22	22	22	22	22	22	(*a*)	(*a*)	(*a*)
Tenali-Repalli *	..	..	..	..	..	..	..	..	..	21
Tezpur-Balipara	20	20	20	20	20	20	20	20	20	20
UNASSISTED COMPANIES.										
Bengal Provincial	33	33	33	33	33	33	33	33	33	33
Dehri-Rohtas Light	..	..	..	..	24	24	24	(*b*)	(*b*)	(*b*)
Jagadhri Light	..	..	..	..	3	3	3	3	3	3
Kulasekarpatnam–Tissianvillai Light	..	..	..	..	..	..	..	..	68	18
Ledo and Tikak Margherita Colliery	9	9	6	6	6	6	6	6	6	6
Madaya Light	..	..	..	..	..	8	8	8	8	8
Total	42	42	39	39	66	74	74	50	68	68
NATIVE STATE LINES.										
Bangalore-Chik Ballapur Light	..	..	..	..	..	..	..	15	29	35
Bhavnagar-Gondal-Junagad-Porbandar	334	338	338	374	..	..	..	..	..	..
Bhavnagar	..	..	..	..	158	173	206	206	206	206
Bhopal-Itarsi*	44	44	44	44	44	44	45	45	45	44

* Worked by a Company.
‡ These are the latest figures published in 1917.

(*a*) Incorporated with the East Indian Railway on the 1st January 1915.
(*b*) Shown under Assisted Companies.

‡ Mileage of Railway Lines in India open for Traffic at end of year—*contd.*

Railways.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.
NATIVE STATE LINES—*contd.*										
Bhopal-Ujjain*	113	113	113	113	113	113	113	113	113	113
Bikaner	..	..	..	..	..	..	470	470	498	498
Bilimora-Kalamba *	..	..	..	..	..	..	..	26	26	26
Bina-Goona-Baran*	146	146	146	146	146	146	146	146	146	146
Birur-Shimoga*	38	38	38	38	38	38	38	38	38	38
Cooch-Behar	34	34	34	33	33	33	33	33	33	33
Cutch	12	36	36	37	37	37	37	37	37	37
Dholpur-Bari	..	20	20	20	20	20	28	37	37	37
Dhrangadra	21	21	21	21	21	21	21	40	43	43
Gaekwar's Dabhoi*	94	94	94	94	94	118	142	142	147	147
Gaekwar's Mehsana*	93	130	138	138	138	138	138	153	153	163
Gondal-Porbandar	..	..	..	..	148	148	148	148	148	148
Gwalior Light*	184	203	250	250	250	250	250	250	250	250
Hindupur*	51	51	51	51	51	51	51	51	51	51
Hingoli Branch*	..	..	..	..	..	50	50	50	50	50
Hyderabad-Godavari Valley*	391	391	391	391	391	391	391	391	391	391
Jaipur*	73	73	73	73	73	73	73	73	73	107
Jammu and Kashmir	16	16	16	16	16	16	16	16	16	16
Jamnagar	54	54	54	54	54	54	54	54	54	54
Jetalsar-Rajkot	46	46	46	46	46	46	46	46	46	46
Jind–Panipat *	..	..	..	..	..	..	..	..	..	26
Jodhpur-Bikaner	709	709	776	831	910	996	(*b*) 587	(*b*) 604	(*b*) 609	609
Junagad	..	..	..	..	89†	101	114	114	121	121
Khanpur-Chachran*	..	..	..	..	22	22	22	22	22	22
Khijada-Dhari *	..	..	..	..	..	..	26	26	26	37
Kolar District	..	..	..	..	..	..	..	11	41	64
Kolar Gold Fields*	10	10	10	10	10	10	10	10	10	10
Kolahpur*	29	29	29	29	29	29	29	29	29	29
Kosamba-Zankhvav	..	..	..	..	..	26	26	26	26	26
Ludhiana-Dhuri-Jakhal	79	79	79	79	79	79	79	79	79	79

* Worked by a Company.
‡ These are the latest figures published in 1917.

† Formerly worked as part of the Bhavnagar-Gondal-Junagad-Porbandar Railway.
(*b*) Jodhpur only—figures of Bikaner have been shown separately.

† Mileage of Railway Lines in India open for Traffic at end of year—*concld.*

Railways.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.
NATIVE STATE LINES—*concld.*										
Mohari Barauli	..	..	..	..	..	..	..	..	..	15
Morvi	94	93	93	93	93	93	93	93	93	93
Mourbhanj*	32	32	32	32	32	32	32	32	32	32
Mysore-Nanjangud*	16	16	16	16	16	16	16	16	16	16
Nagda-Ujjain*	34	34	34	34	34	34	34	34	34	33
Nizam's*	330	330	330	330	330	330	330	330	330	330
Parlakimedi Light*	25	25	25	25	25	25	25	25	25	25
Petlad-Cambay*	34	34	34	34	34	34	34	34	34	34
Petlad-Vaso	..	..	..	..	..	..	..	16	19	19
Pipar Bilara Light	..	..	..	19	19	25	25	25	25	25
Rajpipla*	37	37	37	37	37	37	37	37	37	37
Rajpura-Bhatinda	107	107	107	107	107	108	108	108	108	108
Sangli*	5	5	5	5	5	5	5	5	5	5
Secunderabad Gadwal*	..	..	..	..	..	..	..	..	46	103
Shoranur-Cochin*	65	65	65	65	65	65	65	65	65	65
Tarikere-Narasimharajapur	..	..	..	..	..	..	..	12	12	12
Tinnevelly-Quilon*	58	58	58	58	58	58	58	58	58	58
Udaipur-Chitorgarh	67	67	67	67	67	67	67	67	67	67
Vijapur-Kalol-Kadi*	42	42	42	42	42	46	46	46	46	46
Total ..	3,517	3,620	3,742	3,852	3,974	4,198	4,364	4,504	4,599	4,825
FOREIGN LINES.										
Karaikkal-Peralam*	15	15	15	15	15	15	15	15	15	15
Pondicherry*	8	8	8	8	8	8	8	8	8	8
West of India Portuguese*	51	51	51	51	51	51	51	51	51	51
Total ..	74	74	74	74	74	74	74	74	74	74
Grand Total ..	30,010	30,576	31,490	32,099	32,839	33,484	34,656	35,285	35,833	36,286

* Worked by a Company.

† These are the latest figures published in 1917.

Irrigation.

In the West irrigation is a arer luxury, designed where it exists to increas the productivity of a soil sure of a certain crop under a copious and well distributed rainfall. In great parts of the East, and especially in India, it is a necessity to existence. For in India there are large tracts, such as the deserts of Sind and the South-West Punjab, which are practically rainless; there are others, such as the Deccan plateau, where cultivation is exceedingly precarious, owing to the irregularity of the rainfall and the long intervals when the crops may be exposed to a blazing sun and a dessicating wind; there are some crops, like rice and sugar-cane, which, except in a few highly favoured districts, can only be matured by the aid of irrigation. There are great areas where a single crop, which is called the *kharif*, or rain crop, can in normal years be raised by the unassisted rainfall, but where the second crop, the *rabi* or cold weather crop, is largely dependent on irrigation. Inasmuch as in India sixty-five per cent. of the population is still dependent upon agriculture for the means of livelihood, this brief summary indicates the enormous importance of irrigation to the community.

Its Early History.—It is natural, in such conditions, that irrigation in India should have been practised from time immemorial. In the history and imagery of the East, there is no figure more familiar than the well, with primitive means for raising the water, followed to-day much as they were in Bible days. In the early records of the peoples of India, dating back to many years before the Christian era, there are frequent references to the practice of irrigation. Wells have been in use from time immemorial; most of the innumerable tanks in Southern India have been in use for many generations; the practice of drawing off the flood waters of the Indus and its tributaries by means of small inundation canals has been followed from a very early date; and in the submontane districts of Northern India are still to be found the remains of ancient irrigation channels, which have been buried for centuries in the undergrowth of the forests. But in the direction of constructing large and scientific works for the utilisation of the surplus waters of the great river little was done before the advent of British rule, and they are comparatively of recent date.

The State Intervenes.—Irrigation works in India may be divided into three main heads—wells, tanks and canals. The greatest and the most impressive are the canals, and these may arrest attention first, because they constitute one of the most enduring monuments to British rule. They have in British India been constructed by direct State agency. In the early days of modern irrigation. certain works in the Madras Presidency were carried out by a guaranteed company, and the Orissa canal project was commenced through the same agency. Both Companies fell into difficulties, and the system into disfavour; during the Viceroyalty of Lord Lawrence it was decided that all irrigation works which promised a reasonable return on the capital expenditure should be constructed through direct agency and should be constructed by the State from loan funds as productive public works

The British Inheritance.—The British Government in India inherited a few major irrigation works. One of these was the Grand Anicut—the local term for barrage—stretching across the width of the Cauvery River in Madras. In the Punjab there were a few canals, chiefly inundation—that is above the normal bed of the river and fed from the flood current—constructed by the Muhammedan and Sikh rulers, and owing to its proximity to Delhi, the waters of the Jumna were brought to the neighbourhood of the city by the Mughals. It is doubtful if these works ever irrigated any considerable areas or conferred much benefit on the people, but they suggested the model on which the British engineers worked. In Southern India, Sir Arthur Cotton constructed the upper Anicut across the Coleroon River, so as to secure the full level required for the utilisation of the Grand Anicut across the Cauvery. He also designed the works which, constructed and improved at an outlay of three crores, irrigate more than two million acres in the Godaveri and Kistna deltas. In Northern India Sir Probyn Cautley constructed the great Ganges Canal, which takes off from the river near Hardwar, and which in magnitude and boldness of design has not been surpassed by any irrigation work in India or elsewhere. In this way were laid the foundations of the irrigation system in India. The work was gradually pushed forward. In Northern India a great system of canals was constructed, chiefly in the Punjab and the United Provinces. Some of these, like the great Chenab Canal, ought to be classed amongst the wonders of the world. It irrigates nearly two million acres, or about two-fifths of the cultivable area in Egypt, with an ordinary discharge of eleven thousand cubic feet per second, or about six times that of the Thames at Teddington. The Chenab and the Jhelum Canals brought under irrigation great areas of Government waste, and thereby allowed the system of State colonisation, which relieved the congestion on the older villages of the Punjab, and established colonies of over one million of people on what had been the desolate abode of a handful of nomads. In the Bombay Deccan a few protective works were constructed, like Lake Fife and Lake Whiting, drawing their supplies from the Ghats and spilling them over the arid tracts of the Deccan. In Madras there was completed the boldest and most imaginative irrigation work in the world; by the device of constructing a reservoir at Periyar, on the outer slopes of the ghats, and carrying the water by means of a tunnel through the intervening hill, the Madras Government turned the river back on its watershed and poured its waters over fertile lands starved by want of moisture. But these Deccan works did not pay. The cultivators would not use the water in years of good rainfall, and there was not enough to go far in seasons of drought; the inevitable result of such conditions was to concentrate attention upon the remunerative works on the rivers of the Punjab, and to leave protective irrigation to wilt for want of funds.

The Irrigation Commission.—In order to substitute policy for spasmodic effort, the Irrigation Commission was appointed by Lord Curzon's Government in 1901. It made a

detailed survey of the conditions of the country, and produced the report which is the foundation of Indian Irrigation policy to-day. The figures compiled by the Commission illustrate the progress which had been made up to that period. They showed that out of an area of 226 million acres annually under crop in the irrigating provinces of British India, in round numbers 44 millions acres, or 19½ per cent. were ordinarily irrigated. Of the total area irrigated 18¼ million acres or 42 per cent. was watered by State works (canals and tanks), and 25¼ million acres, or 58 per cent. from private works, of which rather more than one half was from wells During the previous quarter of a century the area irrigated by Government works had been increased by 8 million acres, or by eighty per cent. and the Commission estimated that during the same period the area under private irrigation had increased by at least three million acres or a total addition to the irrigated area in British India of 11 million acres or 33 per cent. Including the Native States the area under irrigation annually within the British Empire was placed at 53 million acres (19 million from canals, 16 million from wells, 10 million from tanks, and 8 million from other sources). The Commission reported that the field for the construction of new works of any magnitude on which the net revenue would exceed the interest charges was limited, being restricted to the Punjab, Sind and parts of Madras—tracts for the most part not liable to famine. They recommended that works of this class should be constructed as fast as possible, not only because they would be profitable investments, but also because they would increase the food supply of the country. Then addressing themselves to the question of famine protection, they worked out a very interesting equation. Taking the district of Sholapur, in the Bombay Deccan, perhaps the most famine-susceptible district in India, they calculated that the cost of famine relief in it was 5 lakhs of rupees a year. From this deduction, and making allowance for the advantage of famine avoidance as compared with famine relief, they said that the State was justified in protecting the land in such a district at a cost of 221 rupees per acre. For the general protection of the Bombay Deccan they recommended canals fed from storage lakes in the Ghats, where the rainfall has never been known to fail even in the driest years. For Madras they recommended the investigation of the old Tungabhadra project, and of a scheme for storage work on the Kistna. They proposed that Government should undertake the construction of protective works for the rice-growing districts of the Central Provinces and the Ken Canal project in Bundelkhand. The Commission further sketched out a rough programme of new major works to be constructed in different parts of India, which would cost not less than 44 crores of rupees and would result in an increase of 6,500,000 acres to the irrigated area. They estimated that the construction of these works would impose a permanent yearly burden of nearly 74 lakhs on the State, through the excess of interest charges on capital cost over the net revenue produced from the works. Against this would have to be set the reduction in the cost of future famines resulting from the construction of the works, which the Commission put at 31 lakhs per annum. The balance of 43 lakhs would represent the net annual cost of the works to the State, or the price to be paid for the protection from famine which the works would afford, and for all other indirect advantages which might be attributed to them. The principal effect of the Irrigation Commission's report was to substitute policy for spasmodic effort, and the progress since made has been remarkable.

Irrigation Dues.—The charges for irrigation, whether taken in the form of enhanced land revenue or of occupiers' and owners' rates, vary very much, depending on the kind of crop, the quantity of water required for it and the time when it is required, the quality of the soil, the intensity or constancy of the demand, and the value of irrigation in increasing the outturn. In the immediate vicinity of Poona a rate of Rs. 50 an acre is paid for sugarcane. This is quite an exceptional rate, it obtains over only a limited area, and is made practicable only because the cultivators, by high manuring, can raise a crop valued at nearly eight-hundred rupees an acre. On other parts of the Mutha canal the rate varies from Rs. 40 to Rs. 12, and on other canals in the Bombay Deccan from Rs. 25 to Rs. 10 per acre. In Madras the maximum rate for sugarcane is Rs. 10, and in the Punjab it does not exceed Rs. 8-8. The rate charged for rice varies in Madras from Rs. 5 to 2, and in Bengal from Rs. 2-8 to Rs. 1-8 per acre. In both these provinces irrigation is practically confined to rice; in the Punjab, where this crop is not extensively grown, the rate varies from Rs. 7 to Rs. 3-4 per acre. The ordinary rate in the Punjab for wheat, which is the principal crop, varies from Rs. 4-4 to Rs. 3-12, and for fodder crops from Rs. 3 to 2-8 per acre. The average rate realised from major works for irrigation of all kinds is about Rs. 3-8 per acre, the provincial averages being Rs. 1-9 in Sind and Bengal; Rs. 3-4 in the Punjab; Rs. 4-8 in Madras, the United Provinces and the Bombay Deccan. The charges for irrigation may be taken as varying from 10 to 12 per cent. of the value of the crop, except in Bengal and the Bombay Deccan, where the average is little more than six per cent.

Canals and Navigation.—Twenty years ago a great deal was heard about the desirability of constructing navigation canals, either in conjunction with irrigation or for transport, pure and simple. The idea is now exploded. It received a certain stimulus from the unprofitable character of Indian railways, and the handsome earnings of the irrigation works; it received its quietus when the railways turned the corner. Broadly speaking it may be said that navigation and irrigation rights clash; navigation is not only costly, but it cannot be maintained during the season of short supply, except to the detriment of irrigation. Outside the deltaic tracts of Bengal; Orissa, Madras and Sind, navigable canals will never be of much use for the purpose of inland navigation. There is however considerable scope for connecting canals to improve the facilities for navigation on the great river system of Eastern Bengal. This is a question which is now engaging the attention of the Government.

PRESENT POSITION OF IRRIGATION.

Government irrigation and navigation works of India are classified under three main heads :— (*a*) Productive works, (*b*) Protective works, (*c*) Minor works—the first two classes constituting what are known as "Major" works.

Productive Works are works of a remunerative character undertaken either for the purposes of navigation or in the interests of the general agricultural development of the country and both their first cost and any subsequent expenditure on extensions and improvements are met from loan funds. The percentage of net revenue to capital cost in 1916-17 on some of the larger productive irrigation systems is tabulated :—

Province.	Name of work.	Capital expenditure in lakhs of rupees.	Percentage.
Madras	Godaveri Delta system	150	21·4
	Kistna Delta system	163	17·1
	Periyar system	107	3·9
United Provinces ..	Ganges Canal	387	10·2
	Lower Ganges Canal	417	5·7
	Agra Canal	123	6·5
Punjab	Western Jumna	177	10·2
	Upper Bari Doabs	218	17·4
	Sirhind	256	11·6
	Lower Chenab	324	43·6
	Lower Jhelum	159	23·6

The larger productive works which were under construction during the year were :—

Province.	Name of work.	Estimated cost in lakhs of rupees.
Punjab	Upper Chenab Canal	365
	Upper Jhelum Canal	451
	Lower Bari Doab Canal	220
North-West Frontier	Upper Swat Canal	206
Central Provinces	Mahanadi Canal	99

Protective Works are those which, although not directly remunerative to the extent which would justify their inclusion in the class of productive works, are constructed with a view to the protection of precarious tracts and to guard against the necessity for periodical expenditure on the relief of the population in times of famine. The cost of these works is a charge against the current revenues of India, and is generally met from the annual grant for Famine Relief and Insurance.

The larger works of this class in operation are tabulated with the returns obtained in 1916-17 :—

Province.	Name of work.	Capital expenditure in lakhs of rupees.	Percentage.
Madras	Rushikulya system	51	1·9
Bombay	Godaveri Canal	100	0·9
	Nira Canal	65	5·3
United Provinces ..	Betwa Canal	83	0·8
	Ken Canals	60	—0·4
Bihar and Orissa ..	Tribeni Canal	76	—2·7

Of the works under construction the following are the more important :—

Province.	Name of work.	Estimated cost in lakhs of rupees.
Bombay	Pravara Canals	76
	Nira Right Bank Canal	258
Central Provinces ..	Tandula Canal	100

Minor works comprise those irrigation and navigation works not classed as productive or protective, and agricultural works which are undertaken for the general improvement of the country; the outlay upon them is met from current revenues. Some of them are old works constructed by the former rulers of this country and extended or restored by the British Government, some have been constructed by the British Government and others are village works, originally provided by private or communal effort, the control of which has been assumed by the State owing to dispute between the parties interested or to their inability to maintain the works in an efficient state of repair. Capital and revenue accounts are kept of these works where they cost more than Rs. 50,000 and where it is anticipated that the revenue derived from them will suffice to cover the working expenses. There are 121 such works, the capital expenditure on which totals 665 lakhs, and they produced, in 1916-17, a net revenue of 40½ lakhs of rupees.

Area Irrigated.—The total area irrigated by all the productive public works, excluding branches in the Native States of the Punjab, amounted in the year to slightly more than 17 million acres. Towards this total the Punjab canals contributed nearly 8 million acres, Madras 3½ millions, the United Provinces 2½ millions and Sind 1½ millions. The return on capital outlay was highest in Madras, where the canals yielded 13·2 per cent. The next province in this respect was the Punjab, where a return of 12·99 per cent. was realized, while in the United Provinces and Sind percentages of 8·55 and 7·57 per cent., respectively, were obtained The return on productive works throughout India, excluding those under construction and not yet earning revenue, was 8·81 per cent. on the capital outlay.

Thirty-five protective works were in operation and 385,000 acres were irrigated. The total capital outlay incurred on works of this nature up to the end of the year amounted to 7 crores of rupees, and, excluding works under construction, a return of 1·08 per cent. was realized.

Minor works are divided into three classes according to the method of accounting adopted and for the sake of simplicity these may be termed (*a*) first class minor works, the capital cost of which has exceeded Rs. 50,000 and the revenue obtained from which is expected to cover the working expenses, (*b*) second class minor works costing less than Rs. 50,000 each and (*c*) third class minor works which consist mainly of small tanks, the majority of which are situated in the Madras presidency. Of the 121 works of the first class 113 are irrigation works while the remaining 8 are maintained purely for navigation purposes. The net revenue realized from works of this category

(excluding navigation canals) amounted in 1916-17 to 38 lakhs of rupees, which corresponds to a return of 8·7 per cent. on the capital outlay incurred upon them. The area served was 2¼ million acres, inclusive of 500,000 acres in Burma which represent land under cultivation which has been reclaimed from the rivers by means of flood embankments, the cost of which has been charged to this head. The second class works, which are credited with a share of the land revenue on the areas they protect, and are debited with all expenditure incurred on maintenance, extensions and improvements, irrigated nearly 3 million acres during the year under review, and produced a net revenue of 46½ lakhs. In addition some 8½ million acres were irrigated by works of the third class, which comprise over 37,000 small tanks. The total area served by minor works of all classes was thus slightly more than 8½ million acres, or almost exactly one third of the total area irrigated during the year by Government irrigation systems.

Cropped and Irrigated area—A comparison of the acreage of crops matured by means of the Government irrigation systems, with the total area under cultivation in the several provinces in 1916-17, shows :—

Province.	Net area cropped.	Area irrigated by Government irrigation works.	Percentage of irrigated area to total cropped area.	Capital cost of Government irrigation works to end of 1916-17 in lakhs of rupees.	Estimated value of crops raised on areas receiving State irrigation, in lakhs of rupees.
	Acres.	Acres.			
Burma	14,415,000	1,363,000	9·4	283	439
Bengal	24,665,000	115,000	0·5	245	81
Bihar and Orissa	8,242,000	844,000	10·2	628	442
United Provinces of Agra and Oudh	36,139,000	2,912,000	8·0	1,252	1,627
Ajmer-Merwara	420,000	31,000	7·4	35	13
Punjab	27,451,000	8,922,000	32·5	2,212	3,209
North-West Frontier Province	2,875,000	334,000	11·6	266	158
Sind	3,850,000	3,820,000	99·2	326	938
Bombay Deccan	25,311,000	266,000	1·0	497	187
Central Provinces (excluding Berar)	14,643,000	135,000	0·9	231	46
Madras	39,052,000	7,280,000	18·6	1,108	2,056
Baluchistan	24,000	5,000	20·8	41	2
TOTAL ..	197,087,000	26,027,000	13·2	7,124	9,198

13 per cent. of the cropped area is irrigated by Government irrigation works, and that the estimated value of the crops so irrigated in a single year exceeds by more than 25 per cent, the total capital outlay expended on these works.

Comparisons.—The following table compares the area irrigated by Government works during the year with the average area so irrigated during the previous triennium:—

Province.	Productive.		Protective.	
	1913-14 to 1915-16.	1916-17.	1913-14 to 1915-16.	1916-17.
	Acres.	Acres.	Acres.	Acres.
Madras	3,461,444	3,471,265	108,272	104,646
Bombay Deccan	88,870	27,208	94,817	63,020
Sind	1,342,479	1,490,990	....	....
Bengal	80,713	85,827	....	....
United Provinces	2,974,337	2,605,194	202,630	145,234
Punjab	7,188,446	7,880,214	....	....
Bihar and Orissa	844,632	811,570	64,383	31,470
Burma	271,811	270,938	....	....
Central Provinces	4,993	76,201	34,191	40,256
North-West Frontier Province	265,202	334,445	....	....
Rajputana	....	....	....	....
Baluchistan	....	....	....	....
Total	16,522,927	17,053,852	504,293	384,626

Province.	Minor.		Total.	
	1913-14 to 1915-16.	1916-17.	1913-14 to 1915-16.	1916-17.
	Acres.	Acres.	Acres.	Acres.
Madras	3,663,842	3,703,708	7,233,558	7,279,619
Bombay Deccan	131,521	175,729	315,208	265,957
Sind	2,231,503	2,328,884	3,573,982	3,819,874
Bengal	23,539	28,899	104,252	114,726
United Provinces	143,513	161,663	3,320 480	2,912,091
Punjab	951,421	1,042,513	8,139,867	8,922,727
Bihar and Orissa	1,656	712	910,671	843,752
Burma	991,700	1,092,558	1,263,511	1,363,496
Central Provinces	19,706	18,239	58,890	134,696
North-West Frontier Province	2,500	....	267,702	334,445
Rajputana	19,553	30,512	19,553	30,512
Baluchistan	4,589	5,047	4,589	5,047
Total	8,185,043	8,588,464	25,212,263	26,026,942

PROGRESS OF BIG WORKS.

This statement shows the progress made in the development of major works (productive and protective) during the last 30 years :—

Year.	Mileage of Channels.		Capital outlay of year.*	Capital outlay to end of year.†	Net revenue.	Area irrigated.
	Main Canal.	Distributaries.				
	Miles.	Miles.	Lakhs of rupees.	Lakhs of rupees.	Lakhs of rupees.	Thousand of acres.
1887–88	5,571	17,524	62	2,575	88	5,769
1888–89	5,542	19,996	54	2,629	101	6,555
1889–90	5,650	20,308	36	2,675	109	7,041
1890–91	6,165	21,399	58	2,733	124	7,177
1891–92	6,282	22,315	81	2,941	127	7,560
1892–93	6,620	22,541	60	3,002	139	7,066
1893–94	6,687	23,277	76	3,080	125	6,953
1894–95	6,746	23 800	65	3,148	129	6,193
1895–96	6,753	24,313	74	3,226	126	7,955
1896–97	6,839	25,475	79	3,309	201	19,173
1897–98	6,857	26,018	74	3,387	238	10.246
1898–99	7,186	26,971	68	3,457	222	9,858
1899–1900	7,168	27,431	94	3,554	231	10,918
1900–01	7,383	28,337	93	3,652	250	10,922
1901–02	7,836	28,463	89	3,744	244	11,648
1902–03	8,012	25,740	94	3,849	274	11.832
1903–04	9,187	26,738	90	3,951	284	13,008
1904–05	9,228	27,231	76	4,031	293	12.641
1905–06	9,440	27,659	120	4,163	282	14,676
1906–07	9,456	27,350	166	4,336	351	13,551
1907–08	10,430	28,755	183	4,583	327	14,286
1908–09	10,665	29,590	203	4,795	335	14,469
1909–10	10,843	30,541	219	5,030	339	14,252
1910–11	11,029	30,877	232	5,271	344	14,163
1911–12	11,398	30,564	286	5,568	378	15,258
1912–13	11,769	32,257	273	5,810	436	14,649
1913–14	12,272	33,165	278	6,089	475	15,243
1914–15	12,366	34,155	252	6,338	460	16,054
1915–16	12,574	34,800	198	6,535	459	15.614
1916–17	12,782	35,635	124	6,666	508	17,438

* Direct expenditure only.

† Direct and indirect expenditure.

Value of the Crops.

A comparison of the acreage of crops matured by means of the Government irrigation systems, with the total area under cultivation in the several provinces, is given below :—

Province	Net area cropped.	Area irrigated by Government irrigation works.	Percentage of irrigated area to total cropped area.	Capital cost of Government irrigation works to end of 1915-16 in lakhs of rupees.	Estimated value of crops raised on areas receiving State irrigation, in lakhs of rupees.
	Acres.	Acres.	Per cent.		
Burma	14,089,000	1,271,000	9·0	212	411
Bengal	24,454,000	109,000	6·4	239	81
Bihar and Orissa ..	8,230,000	878,000	10·6	627	404
United Provinces of Agra and Oudh.	35,633,000	3,244,000	9·1	1,237	1,601
Ajmer-Merwara ..	291,000	19,000	6·5	35	5
Punjab	19,380,000	8,219,000	42·4	2,175	2,751
North-West Frontier	2,278,000	307,000	13·4	256	143
Sind	3,400,000	3,378,000	99·3	324	800
Bombay Deccan ..	24,113,000	282,000	1·2	486	188
Central Provinces (excluding Berar).	17,083,000	52,000	0·3	171	20
Madras	39,175,000	7,379,000	18·8	1,102	1,868
Baluchistan	22,000	7,000	31·8	39	2
Total ..	188,148,000	25,145,000	13·3	6,903	8,274

Land for Soldiers.

On October 13th, 1915, the Government of India issued, in a more complete form than has hitherto been available, a summary of their colonisation policy, which is of special interest in relation to the provision of land for ex-soldiers. In the course of this they said :—

The older canals left unirrigated the upper portions of the Jech and the Rechna Doabs and the lower parts of the Bari Doab. The canals, the triple project—the upper Jhelum, the upper Chenab and the lower Bari Doab canals—will bring water to much of the land in the hitherto unwatered portions of these three Doabs. The first and second of the canals, though they will irrigate some 350,000 and 650,000 acres, respectively, give little scope for schemes of colonization as the areas of the Government waste included within the limits of irrigation are comparatively speaking small. On the lower Bari Doab canal, however, the area available for colonization is something like 1,200,000 acres. The bulk of the land, about 750,000 acres (or 30,000 rectangles of 25 acres apiece) is to be given out on terms which will encourage the breeding of horses and mules. About 12,000 rectangles will be distributed, for the most part in grants of one rectangle each, to peasant colonists and ex-soldiers for cultivation. No conditions in regard to horse and mule-breeding will attach to the tenure of these rectangles, but the grantees will be eligible for extra rectangles to which such condition apply. Of these 17,000 rectangles about 7,000 have been set apart for ex-soldiers and for the rest selections have already been made from the peasants of districts lying west of the Sutlej.

Of the remaining 10,000 rectangles 7,000 will constitute the horse and mule-breeding grants. For these the holders of the 17,000 rectangles mentioned above will compete. The land will be given out on ten years' leases on condition that the tenant of each rectangle maintains a mare. A large proportion of the competitors will be military men. The strong military element among the colonists should go a long way to ensure the success of this part of the scheme. Ex-cavalry men, especially, should make first rate breeders. The soldier grantees will be selected by the military authorities, after the war, and will probably be for the most part retired officers and non-commissioned officers.

There are only about 78,000 acres of Government land irrigated by the Upper Chenab Canal and of this 42,000 acres will receive perennial irrigation, whilst the remainder will be irrigated for the khariff harvest only. On the Upper Chenab Canal and on the Upper Jhelum Canal no more than 40,000 acres is available for colonization. Out of this provision has been made up to a maximum of 15,000 acres for reward grants to persons in the Rawalpindi division who rendered assistance to the criminal administration, 5,000 acres are to be given as compensation grants and another 6,000 acres will be kept in reserve for rewards to the army. 6,000 acres have been provided for tenants now holding land on the Lower Jhelum Canal, whom it is desired to remove in order to allow for the extension of certain regimental horse runs. 1,000 acres are desired for special reward grants to military officers, and the balance will provide for grazing grounds and miscellaneous requirements.

WELLS AND TANKS.

So far we have dealt only with the great irrigation schemes. They are essentially exotic, the products of British rule; the real eastern instrument is the well. The most recent figures give thirty per cent.of the irrigated area in India as being under wells. Moreover the well is an extremely efficient instrument of irrigation. When the cultivator has to raise every drop of water which he uses from a varying depth, he is more careful in the use of it; well water exerts at least three times as much duty as canal water. Again, owing to the cost of lifting, it is generally used for high grade crops. It is estimated that well-irrigated lands produce at least one-third more than canal-watered lands. Although the huge areas brought under cultivation by a single canal scheme tend to reduce the disproportion between the two systems, it must be remembered that the spread of canals increases the possibilities of well irrigation by adding, through seepage, to the store of subsoil water and raising the level.

Varieties of Wells.—Wells in India are of every description. They may be just holes in the ground, sunk to subsoil level, used to a year or two and then allowed to fall into decay. These are temporary or kacha wells or they may be lined with timber, or with brick or stone. They vary from the kacha well costing a few rupees to the masonry well, which will run into thousands, or in the sandy wastes of Bikanir, where the water level is three hundred feet below the surface, to still more. The means of raising the water vary in equal degree. There is the *picottah*, or weighted lever, raising a bucket at the end of a pivoted pole, just as is done on the banks of the Nile. This is rarely used for lifts beyond fifteen feet. For greater lifts bullock power is invariably used. This is generally harnessed to the *mot*, or leather bag, which is passed over a pulley overhanging the well, then raised by bullocks who walk down a ramp of a length approximating to the depth of the well. Sometimes the *mot* is just a leather bag, more often it is a self-acting arrangement, which discharges the water into a sump automatically on reaching the surface. By this means from thirty to forty gallons of water are raised at a time, and in its simplicity, and the ease with which the apparatus can be constructed and repaired by village labour, the *mot* is unsurpassed in efficiency. There is also the Persian wheel, an endless chain of earthenware pots running round a wheel. Recently attempts have been made, particularly in Madras, to substitute mechanical power, furnished by oil engines, for the bullock. This has been found economical where the water supply is sufficiently large, especially where two or three wells can be linked. Government have systematically encouraged well irrigation by advancing funds for the purpose and exempting wellwatered lands from extra assessment due to improvement. These advances, termed *takavi*, are freely made to approved applicants, the general rate of interest being 6¼ per cent. In Madras and Bombay ryots who construct wells, or other works of agricultural improvement, are exempt from enhanced assessment on that account. In other provinces the exemption lasts for specific periods, the term generally being long enough to recoup the owner the capital sunk.

Tanks.—Next to the well, the indigenous instrument of irrigation is the tank. The village, or the roadside tank is one of the most conspicuous features in the Indian scene. The Indian tank may be any size. It may vary from a great work like Lakes Fife and Whiting in the Bombay Presidency or the Periyar Lake in Travancore, holding up from four to seven billion cubic feet of water, and spreading their waters through great chains of canal, to the little village tank irrigating ten acres. They date back to a very early stage in Indian civilisation. Some of these works in Madras are of great size, holding from three to four billion cubic feet, with water spreads of nine miles. The inscriptions of two large tanks in the Chingleput district of Madras, which still irrigate from two to four thousand acres are said to be over 1,100 years old. Tank irrigation is practically unknown in the Punjab and in Sind, but it is found in some form or other in all other provinces, including Burma, and finds its highest development in Madras. In the ryotwari tracts of Bombay and Madras all but the smallest tanks are controlled by Government. In the zemindari tracts only the large tanks are State works. According to the latest figures the area irrigated from tanks is about eight million acres, but in many cases the supply is extremely precarious. So far from tanks being a refuge in famine they are often quite useless inasmuch as the rainfall does not suffice to fill them and they remain dry throughout the season.

BUILDINGS AND ROADS.

The Buildings and Roads branch of the Public Works Department embraces all the operations of the Department which are not classed under the special heads of Railways and Irrigation. It includes the extension and maintenance of the road system, the construction and repair of all the buildings required for the proper discharge of the functions of government in all its branches, and a large miscellaneous class of works of public improvement, including lighthouses, harbours, embankments, boat bridges, and ferries, and the water supply and sanitation of towns.

The operations of this branch of the Department are classed primarily under the head of Civil Works, the expenditure on which is chiefly met from provincial resources. The classification of this expenditure for 1914-15 under the various heads is shown in the following table :—

——	Central Provinces and Berar.	Burma.	Assam.	Bengal.	Bihar and Orissa.	United Provinces of Agra and Oudh.	Punjab.	North-West Frontier Province.	Madras.	Bombay.	India General.	Total.
	£	£	£	£	£	£	£	£	£	£	£	£
Imperial	72,050	49,661	2,533	89,409	26,255	74,920	37,148	208,198	36,842	80,536	230,674	908,226
Provincial*	529,551	775,734	364,270	831,581	664,327	507,741	610,853	..	1,086,986	756,747	..	6,127,790
Total ..	601,601	825,395	366,803	920,990	690,582	582,661	648,001	208,198	1,123,828	837,283	230,674	7,036,016

* Includes expenditure by the Civil Department in addition to that by the Public Works Department

Expenditure by Civil Officers from Imperial Funds ..	£	52,995
Expenditure in England	£	87,739
Grand Total	£	7,176,750

The extension of local Government in India has thrown a large portion of the smaller class of public works into the hands of the local Boards. Speaking generally, the boards maintain their own establishments, but in the case of any works of unusual difficulty they have recourse to the professional skill of the Public Works Officers.

The broad characteristics of the trade of India are familiar to readers of the Indian Year Book. India is chiefly an agricultural country, for sixty-seven per cent. of its people are dependent on agriculture for their means of livelihood. Consequently the prosperity of the country is largely determined by the character of the monsoon rains. An area which grows larger every year is protected by irrigation, and the extension of these works, with the increased resisting power of the people and the growth of manufacturing industry is expected to make the people immune from the shock of such famines as those of 1896-97 and 1899-1900; but many of the irrigation works, such as tanks and wells, depend on the rains, for their replenishment. Consequently the trade of the year is mainly determined by the rains, which decide the export trade and the consequent purchasing power of the people. Another feature which arises from these conditions is that the imports are mainly of manufactured goods and the exports of produce. The imports of manufactures in pre-war days chiefly came from the United Kingdom whose exporting power has been seriously diminished by the diversion of the energies of the people to the war. A large part of the export in pre-war days went to the Continent of Europe and that market was closed by the war. On these grounds then the trade conditions of 1917-18 were dominated by the war. It is in the relation of the trade of India to the war that we find the most profitable line of study in considering the history of the past year. The main conclusions are indicated in the annual review of Indian trade, by the Director of Statistics Mr. G. Findlay Shirras, from which the following article is mainly drawn.

THE TRADE OF THE YEAR.

Owing to the phenomenal shortage of ocean freight and the restrictions in the outflow of merchandise in various ways, India (which had held before the outbreak of war the second place in the Empire's trade, next only after the United Kingdom), gave pride of place to Canada. The imports of merchandise were approximately the same in value as in the preceding year. There was, however, in the exports of merchandise a decrease of only one per cent. The value of the overseas trade in merchandise in the year ending 31st March 1918 was nearly 393 crores (£262 millions) as against Rs. 395 crores (£263 millions) in the previous year, and Rs. 370 crores (£247 millions) the pre-war average. Imports of merchandise, as compared with the pre-war quinquennium, recorded an increase of 3 per cent, exports of 6 per cent., and re-exports, owing to the scarcity of shipping, of no less than 97 per cent. The net imports of treasure on private account amounted to nearly Rs. 21 crores (£14 millions) as against Rs. 10 crores (nearly £7 millions) in 1916-17, and Rs. 36 crores (£24 millions) the average of the pre-war quinquennium. According to the ordinary trade returns, the imports of 1917-18 were valued at Rs. 150 crores, an increase of Rs. 79 lakhs over 1916-17; but when the prices of the latter year are applied, the value is reduced to Rs. 122 crores, thus showing an increase in the import trade on account of higher prices of Rs. 28 crores or 23 per cent. If quantity is taken, by comparing the value of the year's trade re-calculated at prices of 1916-17 with the actual value of the trade in 1916-17, the figures reveal a decrease of nearly Rs. 27 crores or 18 per cent. in the volume of the import trade. Indian importers had to pay 23 per cent. more in order to get 18 per cent. less. Regarding exports, the actual declared value in 1917-18 was Rs. 233 crores, while the value calculated at the prices of the previous year was Rs. 216 crores, or, in other words, there was a gain of Rs. 17 crores or 8 per cent. on account of higher prices. The volume of the exports showed a decrease of Rs. 21 crores or 9 per cent.

Value of Trade.—The declared value of the trade as compared with that of the two previous years and the pre-war quinquennium was as follows:—

Imports and exports of Private Merchandise and net imports of treasure on private account.

Private Merchandise.	Average of five years 1909-10 to 1913-14.	1915-16.	1916-17.	1917-18.	Increase (+) or decrease (—) in 1917-18 as compared with the pre-war average.
	Rs.	Rs.	Rs.	Rs.	(per cent).
Imports of Merchandise ..	1,45,84,72,000	1,31,98,63,000	1,49,63,53,000	1,50,42,51,000	+ 3
Exports of Indian Merchandise ..	2,19,49,73,000	1,92,53,43,000	2,37,07,36,000	2,33,43,44,000	+ 6
Re-exports of Foreign Merchandise ..	4,61,88,000	4,84,59,000	8,07,71,000	9,12,09,000	+97
Total private Merchandise.	3,69,96,33,000	3,29,36,65,000	3,94,78,60,000	3,92,98,04,000	+ 6
Net Imports of Treasure (Private).					
Gold (net imports)	28,86,34,000	—1,14,66,000	13,27,61,00	19,93,86,000	—31
Silver ,, ..	7,20,91,000	5,57,60,000	—3,32,03,000	68,52,000	—90
Total treasure (net imports).	36,07,25,000	4,42,94,000	9,95,58,000	20,62,38,000	—43

In the table given stores and treasure imported or exported on Government accounts are excluded. The values of articles of national importance exported on Government account are included under private exports, and are, therefore, excluded from exports of stores on Government account.

Imports and exports of Government stores and net imports of treasure on Government account.

	Average of five years 1909-10 to 1913-14.	1915-16.	1916-17.	1917-18.
	Rs.	Rs.	Rs.	Rs.
Imports of Merchandise ..	5,82,28,000	6,18,31,000	10,61,37,000	13,92,97,000
Exports of Indian Merchandise.	5,46,000	1,71,05,000	2,04,15,000	2,21,72,000
Re-exports of Foreign Merchandise	5,83,000	38,97,000	11,89,000	12,21,000
Total Stores ..	5,93,57,000	8,28,33,000	12,77,41,000	16,26,90,000
NET IMPORTS OF TREASURE (ON GOVERNMENT ACCOUNT).				
Gold (net imports)	—71,49,000	3,75,000	—4,07,000	5,24,00,000
Silver (..)	3,51,97,000	—74,64,000	22,12,04,000	18,35,66,000
Total treasure (net imports) ..	2,80,48,000	—70,89,000	22,07,97,000	23,59,66,00

Munitions of War.—Thanks to the unusually good monsoon, it was possible to export considerable quantities of munitions of war to the United Kingdom and the Allies. In 1917-18 India sent goods to the value of Rs. 127 crores (nearly £85 millions) to the United Kingdom and other parts of the British Empire and Rs. 90 crores (£60 millions) to the Allies. The bulk of the exports to the United Kingdom and her allies consisted of articles of national importance. As compared with the pre-war period, the quantities and values of the exports of food-grains, especially wheat, barley and gram, jute manufactures, tea and tanned hides considerably increased. The total value of food-grains exported amounted to nearly Rs. 54 crores (£36 millions) as against Rs. 46 crores (over £30 millions) the pre-war average, of which wheat accounted for Rs. 19 crores (nearly £13 millions). Jute manufactures, mainly gunny bags and cloth were valued at approximately Rs. 43 crores (£29 millions) in 1917-18, as against Rs. 20 crores (£13 millions) in the pre-war quinquennium, tea at nearly Rs. 18 crores (12 millions) as against Rs. 13 crores (£9 millions) and tanned hides at Rs. 5 crores (£3 millions) as against Rs. 1½ crores (£1 million). The most noticeable changes, as compared with the pre-war year 1913-14, were the increases in the imports of fuel, oil, petrol, cocoanut oil, opra, cigarettes, coffee, and tea, and the decreases in sulphuric acid, alizarine and aniline dyes, metals, motor cars, kerosene oil, paper, wood pulp, provisions, salt, railway materials and cotton and woollen goods. Under exports, indigo, gram, maize, pulse, tanned cowhides, chromite, pig lead, vegetable oils, rubber, cotton and jute goods, and cigarettes, showed important increases, while there were large decreases in oilseeds, coal, raw hides, raw textiles, especially raw jute, tanned skins, manures and zinc.

Prices.—At the end of March 1918, as compared with the corresponding period of 1917, raw cotton showed a rise of no less than 86 per cent., sesamum seed 32 per cent., rape seed of 11 per cent., and food-grains of 16 per cent. (mainly bajra 49, jawar 43, and wheat 13, the increase the case of rice being only one per cent.) In raw jute, owing to the prohibition of export there was a fall of 30 per cent. in price. As compared with the level of prices at the end of March 1914, raw cotton showed an increase of 150 per cent. and food-grains 13 per cent. (mainly jawar, bajra and wheat, rice showing a fall of 11 per cent.), while raw jute showed a decrease of 44 per cent., linseed 10 per cent. and rapeseed 12 per cent. Retail prices of the articles of food rose to a much smaller extent than in most countries. A high level of prices prevailed for imported articles especially cotton piece-goods, kerosine oil and salt.

Capital.—The total number of Joint Stock Companies registered in 1917-18 was 278 with an authorised capital of Rs. 30,58 lakhs as against 184 companies with an authorised capital of Rs. 17,26 lakhs in the preceding year. The large increase in capital was chiefly under Banks, owing to the flotation of the Tata Industrial Bank with an authorised capital of Rs. 12 crores. Company flotations in the year 1917-18 and in the preceding four years were as follows:—

Authorised Capital in lakhs of rupees.

——	Banking and Loan.	Cotton Mills.	Jute Mills.	Tea planting.	Coal mining.	Others.	Total.
	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).
1913-14 (pre-war year) ..	6,26	84	56	51	17	58,57	66,91
1914-15	39	47	..	18	27	3,12	4,43
1915-16	32	29	64	29	17	5,49	7,20
1916-17	3,05	92	3,73	1,18	69	7,69	17,26
1917-18	12,51	82	1,00	1,14	78	14,33	30,58

The prices of securities and shares show a general increase so far as industrials are concerned, while there was a decrease in the market price of Government securities and Municipal Debentures as will be seen from the table given below which is perhaps an interesting sidelight of the effects of the war on Indian industry :

Index numbers of the prices of securities and shares taking the price on the 29th July 1914 as 100.

——	29th July 1914.	26th July 1917.	26th March 1918.
5 Government securities	100	70	68
101 Port Trust and Municipal Debentures	100	89	84
10 Banks	100	106	112
32 Jute Mills (Ordinary)	100	311	467
66 Cotton Mills (Ordinary)	100	132	161
90 Coal Companies (Ordinary)	100	141	137
1 Woollen Mill (Cawnpore—Ordinary)	....	106	125
88 Tea Companies (Ordinary)	100	127	125
7 Flour Mills (Ordinary)	100	120	162
1 Iron and Steel Company (Tata—Ordinary) ..	100	332	295

THE IMPORT TRADE.

The value of the imports of merchandise in 1917-18 was over Rs. 150 crores (£100 millions) and showed an increase of Rs. 79 lakhs (£526,000) over the preceding year. The value in 1917-18 was 3 per cent. higher than the annual average of the five years immediately preceding the war and, with the exception of the two pre-war years 1912-13 and 1913-14, was the highest recorded. The value of the import trade since the beginning of this century was as follows :—

	Rs. (lakhs)
Five years ending 1903-04	78,42
,, ,, ,, 1908-09	111,85
,, ,, ,, 1913-14 (pre-war year) ..	145,85
,, ,, ,, 1917-18	150,64
Year 1913-14 (pre-war year)	183,25
Year 1914-15	137,93
,, 1915-16	131,99
,, 1916-17	149,63
,, 1917-18	150,42

As compared with 1916-17, the value of imported cotton manufactures showed the largest increase, *viz.*, Rs. 3,64 lakhs. The imports of matches increased by Rs. 1,19 lakhs, chemicals by Rs. 85 lakhs, and articles imported by post by Rs. 97 lakhs. The most noticeable decreases were in motor cars and motor cycles (Rs. 1,42 lakhs), railway plant and rolling stock (Rs. 1,07 lakhs) and kerosine oil (Rs. 80 lakhs).

Bengal showed an increase of nearly Rs. 2 crores, mainly accounted for by cotton manufactures. Imports into Bombay showed an increase of more than a crore of rupees. On the other hand, there was a decrease of Rs. 2 crores in the case of Burma, nearly half of which was accounted for by cotton goods.

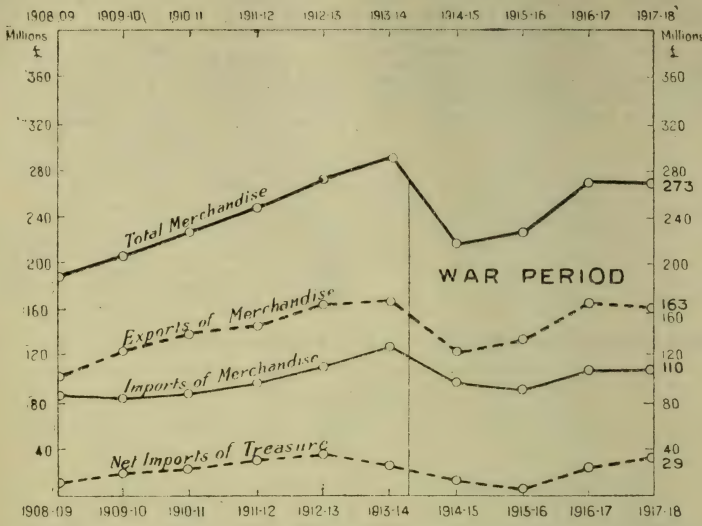
Chief Imports :—The chief imports into India were as follows :—

———	Annual average of five years 1909-10 to 1913-14.	1916-17.	1917-18.
	Rs.	Rs.	Rs.
Cotton goods	48,40,85,000	49,01,57,000	52,40,74,000
,, yarn	3,77,18,000	4,04,89,000	4,29,52,000
Sugar	13,17,58,000	15,45,03,000	15,31,98,000
Iron and steel	11,17,45,000	8,88,06,000	7,75,80,000
Machinery of all kinds, including belting.	5,80,04,000	6,01,12,000	5,23,50,000
Chemicals, drugs, etc.	2,12,73,000	3,50,87,000	4,30,10,000
Silk, raw and manufactures	3,94,54,000	3,94,80,000	4,02,75,000
Mineral oil	3,72,03,000	4,43,93,000	3,63,07,000
Hardware	3,17,04,000	3,10,87,000	2,71,55,000
Liquors	2,02,46,000	2,33,01,000	2,49,96,000
Paper and pasteboard	1,27,07,000	2,33,10,000	2,31,12,000
Salt	79,16,000	1,91,46,000	2,20,08,000
Provisions	2,05,10,000	2,80,91,000	1,77,37,000
Motor cars and cycles	1,00,64,000	2,14,41,000	72,16,000
Railway plant and rolling-stock ..	6,10,94,000	1,56,86,000	49,63,000

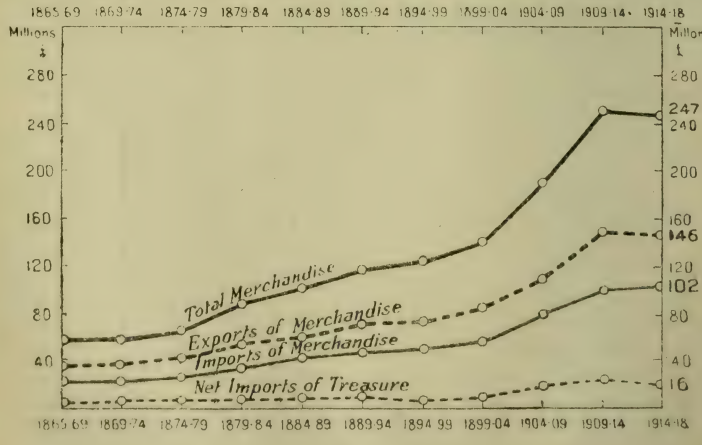
Cotton manufactures.—The value of the imports of cotton manufactures increased to nearly Rs. 57 crores from Rs. 53 crores in 1916-17, and Rs. 52 crores the pre-war quinquennial average. This increase was due entirely to a large rise during the year in the prices of cotton goods for the quantity imported is diminishing steadily. These imports were 38 per cent. of the value of

The Foreign Sea-borne Trade of India.

(*a*) *In a decade*—1908-09 *to* 1917-18.



(*b*) *During half a century* 1865-66 *to* 1917-18.



the total imports in 1917-18, as compared with 35 per cent. in 1916-17 and 36 per cent. during the pre-war quinquennium. The chief descriptions of imports were as follows:—

	Average of five years 1909-10 to 1913-14.	1916-17.	1917-18.
	Rs.	Rs.	Rs.
Twist and yarn	3,77,18,000	4,04,89,000	4,29,52,000
Piece-goods—			
Grey (unbleached)	21,08,56,000	16,86,98,000	18,43,23,000
White (bleached)	11,20,33,000	12,79,35,000	14,20,48,000
Coloured, printed or dyed	13,15,47,000	15,08,84,000	16,14,58,000
Fents of all descriptions	....	89,47,000	94,21,000
Total piece-goods ..	45,44,36,000	45,64,64,000	49,72,50,000
Hosiery	92,86,000	1,41,34,000	1,02,52,000
Handkerchiefs and shawls	52,20,000	17,88,000	15,90,000
Thread	36,10,000	55,32,000	61,89,000
Other sorts	1,15,33,000	1,22,39,000	87,93,000
Total ..	52,18,03,000	53,06,46,000	56,70,26,000

As compared with 1916-17 and also with the pre-war quinquennium, the most noticeable increase was in the value of imported piece-goods which rose by no less than Rs. 34 crores.

Cotton yarn.—The imports of yarn amounted to 19 million lbs., a decrease of 34 per cent. as compared with the previous year, and of 53 per cent. as compared with the pre-war quinquennial average. The quantity was the lowest recorded since 1866-67. The value of these imports, however, increased to Rs. 4,29 lakhs, from Rs. 4,05 lakhs in 1916-17, and Rs. 3,77 lakhs, the pre-war average con equent on the high range of prices. The average declared value per lb. rose to Rs. 2-3-5 pies from Re. 1 and 6 annas in the previous year, and 14 annas 5 pies the pre-war quinquennial average. The following table shows the imports of yarn as compared with the production of yarn in the Indian mills:—

	Imports.	Indian Mills Production.
	lbs.	lbs.
Annual average for the five years 1904-05 to 1908-09 ..	38,573,000	641,776,000
„ „ „ „ „ „ 1909-10 to 1913-14 ..	41,794,000	646,754,000
Year 1913-14	44,171,000	682,777,000
„ 1914-15	42,864,000	651,985,000
„ 1915-16	40,427,000	722,425,000
„ 1916-17	29,530,000	681,107,000
„ 1917-18	19,400,000	660,576,000

The United Kingdom supplied nearly 15 million lbs. or 77 per cent. of the total imports and Japan over 4 million lbs. chiefly counts 31 to 50 and above, and mercerised cotton yarn—or 22 per cent. as against 90 per cent. and 1 per cent., respectively, in the pre-war quinquennium. There were no imports from Holland, and only 18,800 lbs. came from Italy and 144,800 lbs. from Switzerland.

Cotton piece-goods.—The main feature of the trade in India's chief import (cotton piece-goods) was the decrease in the quantity imported, coupled with the large increase in value. As compared with 1916-17, the quantity of grey goods imported decreased by as much as 26 per cent. white goods by 15 per cent. and coloured printed, or dyed by 13 per cent. The value of imported grey goods increased by 9 per cent. to Rs. 18,43 lakhs, white goods by 11 per cent. to Rs. 14,20 lakhs, and coloured goods by 7 per cent. to Rs. 16,15 lakhs. The declared value per yard of grey goods rose by 50 per cent. from 3 annas 2 pies in 1916-17 to 4 annas 9 pies, white goods by 28 per cent. from 3 annas 6 pies to 4 annas 6 pies, and coloured goods by 22 per cent. from 5 annas 4 pies to 6 annas 6 pies. The cost of production of whites has, however, increased more than that of greys. The imports for the past five years with the averages of the two quinquennial periods ending with the years 1908-09 and 1913-14 are given below:—

	Grey (unbleached), millions of yards.	Graey (bleached, millions of yards.	Coloured, printed, or dyed, million of yards.
Average of five years ending 1908-09	1,230·7	572·7	515·4
" " " " " 1913-14	1,331	654·3	631·5
Year 1913-14 (pre-war year) ..	1,534·2	793·3	831·8
" 1914-15	1,320·2	604·2	494·8
" 1915-16	1,148·2	611·4	358·7
" 1916-17	847	589·8	454·9
" 1917-18	625·5	502·3	395·6

Eighty-seven per cent. of the imported grey goods came from the United Kingdom, while the United States supplied less than one per cent. mainly sheetings and drills and jeans, and Japan over 11 per cent. mainly longcloth and shirtings, sheetings and drills and jeans. In white goods the share of the United Kingdom was nearly 99 per cent. and the remainder consisted mainly of long cloth and shirtings from Holland and Japan, and drills and jeans from the latter country. Nearly 92 per cent. of coloured goods was imported from the United Kingdom. The remainder came mainly from Holland 1·1 per cent. (chiefly chuties including lungies), Italy 1·8 per cent. and Japan 4·7 per cent. (chiefly flannels and flannelettes, drills and jeans and shirtings). In addition to these three main classes of piece-goods there were imports of fents of all descriptions which amounted to 32 million yards, valued at Rs. 94 lakhs, as against nearly 42 million yards, valued at Rs. 89 lakhs in 1916-17.

Cotton hosiery.—The value of imported cotton hosiery decreased by 27 per cent. to Rs. 1,02 lakhs. The average value of the imports during the pre-war quinquennium was Rs. 93 lakhs. Imports from Japan were valued at over Rs. 91 lakhs and from the United Kingdom at nearly Rs. 8 lakhs as against Rs. 1,27 lakhs and Rs. 11 lakhs, respectively, in the previous year. The descriptions of piece-goods produced in the Indian mills and exported from British India will be found in the following pages.

Sugar.—With the exception of the imports of cotton manufactures, sugar is India's largest import, and owing to the war, the countries of consignment of these imports are of exceptional interest. The principal sources of supply are shown below (in tons):—

Imports of sugar (excluding molasses and confectionery).

	Average of five years 1909-10 to 1913-14.	1913-14 (pre-war year.)	1915-16.	1916-17.	1917-18.
	Tons.	Tons.	Tons.	Tons.	Tons.
Java	453,000	583,000	415,000	377,700	363,700
Straits Settlements	1,700	2,900	2,600	14,800	61,000
Mauritius	128,800	139,600	69,400	22,900	32,200
Jagn	200	100	11,500	11,600	4,500
China (including Hongkong).	4,500	1,500	13,700	5,900	4,300
Egypt	....	100	3,200	200	1,300
Germany	1,700	700	....	....	....
Austria Hungary	42,600	74,000	....	....	....
Other countries	1,000	1,100	500	7,000	3,700
Total all countries, tons.	633,500	803,000	515,900	440,100	470,700
Value Rs. (000) ..	12,50,97	14,28,85	15,82,63	14,74,05	15,01,04

Iron and Steel.—Iron and Steel, India's largest import after cotton piece-goods and sugar showed a considerable decrease. The total imports amounted to 152,000 tons, a decrease of 41 per cent. as compared with 1916-17, and of 79 per cent. as compared with the pre-war quinquennial average. The value of these imports amounted to Rs. 7,76 lakhs, a decrease in value, notwithstanding the great falling off in quantity of only 13 per cent. as compared with 1916-17.

Railway plant and rolling stock.—The year's imports on private and Government account decreased by 45 per cent. as compared with 1916-17 to Rs. 99 lakhs, of which Rs. 50 lakhs were on private account, and Rs. 49 lakhs on Government account. The total value of the trade in 1917-18 was only one-ninth of the pre-war quinquennial average.

Of the total imports (Rs. 99 lakhs), Rs. 51 lakhs were on account of carriages and wagons, Rs. 38 lakhs on engines, and Rs. 10 lakhs on materials for construction. The share of the United Kingdom was 95 per cent. and the United States 2·5 per cent. as against 93 and 6 per cent., respectively, in the previous year. Siam supplied almost the entire quantity (1,300 tons) of sleepers of wood imported on private and Government account. While rails, chairs and fishplates, sleepers and other materials for construction decreased under imports on private account, there was a noticeable increase in engines and wagons on Government account.

Other Metals.—The imports of copper amounted to approximately 2,600 tons as against 1,700 tons in the previous year and 30,000 tons, the pre-war quinquennial average. Japan increased her shipments of unwrought tiles, ingots, braziers and sheets, wire and other manufactures and her share in the total imports of copper increased to 80 per cent. from 9 per cent., the pre-war average and 26 per cent. in 1916-17. The imports of copper from Australia which are said to be of finer quality than those of Japan amounted to 100 tons as against 1 tons, the pre-war quinquennial average. Brass was imported in the same quantity as in the previous year 2,800 tons. The manufacture of brass has recently been undertaken on a large scale in Calcutta, where a company has been formed, the output of which is expected to be 4 to 5 tons per day. Lead sheets for tea chests are required for the staple industry of tea and the imports of these sheets increased to over 3,200 tons from 3,000 tons in the preceding year, due entirely to larger imports from Ceylon. Imports of tea-chests mainly of wood were valued at Rs. 94 lakhs as against Rs. 87 lakhs in 1916-17. The share of the United Kingdom in the total imports of tea-chests was 43 per cent., Japan 36 per cent. and Russia 14 per cent. as against 63, 11 and 25 per cent., respectively, in the previous year.

Machinery and Millwork.—The value of the total imports of machinery and mill-work, including belting, in 1917-18 amount to Rs. 5,23 lakhs, a decrease of 13 per cent. as compared iwith the preceding year. The most noticeable decreases were in jute mill machinery Rs. 39 lakhs, cotton mill machinery Rs 12 lakhs, electrical machinery Rs. 15 lakhs, mining machinery Rs. 10 lakhs, and tea-garden machinery Rs. 9 lakhs.

Chemicals and Drugs.—The total value of imported chemicals increased by 45 per cent. to Rs. 2,72 lakhs. There was a noticeable increase in the quantity of the imports of sodium carbonate, caustic soda and sulphur, and a decrease in acids, aluminous sulphates (including alum), bleaching materials, carbide of calcium and copperas. Sulphur increased to 9,800 tons from nearly 9,000 tons in 1916-17. The imports from Italy on account of the scarcity in freights were nominal, 2 tons only as against 4,700 tons in the previous year, while Japan more than doubled her exports from 4,100 tons to 9,500 tons. The quantity of the imports of bleaching materials decreased by over 8 per cent. to 5,000 tons, while the value of these imports increased by 21 per cent. to nearly Rs. 21 lakhs. More than two-thirds of the imports of chemicals came from the United Kingdom and one-fifth from Japan. There was a considerable increase in the imports from the United States her share having risen to nearly 11 per cent.

Mineral Oil.—In view of the considerable decrease in the imports of mineral oil detailed statistics of imports are given.

Imports of Mineral Oil.

	Average of five pre-war years 1909-10 to 1913-14.	1916-17.	1917-18.
	Gallons.	Gallons.	Gallons.
Fuel Oil	8,130,000	19,670,000	15,309,000
Kerosene—			
In bulk	50,860,000	44,260,000	26,477,000
„ tins	16,049,000	4,847,000	4,907,000
TOTAL KEROSENE ..	69,909,000	49,107,000	31,384,000
Lubricating Oil	13,522,000	18,683,000	15,375,000
Benzine, benzol, petrol, etc.	131,000	15,000	366,000
Paints, solutions, and compositions	2,000	2,000	...
Other kinds	2,271,000	678,000	363,000
TOTAL MINERAL OIL ..	90,965,000	88,155,000	62,797,000

Hardware.—The most interesting feature in regard to the year's trade in hardware is the way in which Japan and the United States have been steadily trying, not without a large measure of success, to capture the position vacated by Germany and Austria. The total value of the imports amounted to Rs. 2,72 lakhs, a decrease of Rs. 39 lakhs or 13 per cent. as compared with the previous year. Of this the share of the United Kingdom was 41 per cent. as against 59 per cent. in 1916-17. The United States increased her share from 19 to 28 per cent. and Japan from 16 to 25 per cent.

Liquors.—A main feature of the liquor trade was an all-round decrease in the quantity imported. The total imports amounted to 3,443,000 gallons, a decrease of 23 per cent. as compared with the previous year and of 46 per cent. as compared with the pre-war normal. The value of these imports increased by 7 per cent. to nearly Rs. 2,50 lakhs. Fifty-four per cent. of the total quantity of liquors imported consisted of ale, beer, and porter, 39 per cent. of spirits, and 6 per cent. wines. The total imports during the year amounted to 1,858,000 gallons as against 2,586,000 gallons in 1916-17 and 4,405,000 gallons, the pre-war average. The United Kingdom has hitherto been the largest supplier of ale, beer and porter, and for the first time Japan took the lead with 888,000 gallons or 48 per cent. as against 829,000 gallons or nearly 45 per cent. from the United Kingdom. The production of Indian breweries in 1917 was 6,217,000 gallons, an increase of 52 per cent. as compared with that of the previous year.

Paper and paste-board.—The value of the imports of paper and paste-board was only slightly less than in the preceding year. The imports were valued at Rs. 2,31 lakhs as against Rs. 2,33 lakhs in 1916-17, and Rs. 1,27 lakhs, the pre-war quinquennial average. There has been a very noticeable diversion of trade, especially since the outbreak of war. The English paper manufacturer has, by force of circumstances, found it impossible to supply markets abroad. The share, therefore, of the United Kingdom has decreased to nearly 27 per cent. from 47 per cent. in the preceding year, and 58 per cent. in the pre-war quinquennium. Germany and Austria-Hungary (which had one-fourth of the total pre-war imports) left a gap that Japan, Norway, Sweden and to a less extent the United States have attempted to fill. The production of the Indian paper mills amounted to 31,860 tons, almost the same as in the preceding year as against 26,450 tons, the pre-war quinquennial average.

Motor Cars and Motor Cycles.—The number of motor cars imported decreased by as much as 73 per cent. on account of the embargo on the import of motor cars, motor cycles and parts thereof. The prohibition was introduced in December 1916 on two grounds: (1) to check the increase in the consumption of petrol in India, and to ensure an adequate supply for military requirements; and (2) to set free tonnage which is urgently required for other more necessary commodities. The following table shows the number of cars imported since the pre-war year 1913-14 :—

Number of Motor Cars imported.

	From United Kingdom.	From United States.	From other countries.	Total.
1913-14 (pre-war year)	1,669	868	343	2,880
1914-15	1,350	510	145	2,005
1915-16	787	2,136	198	3,121
1916-17	489	4,169	120	4,778
1917-18	39	1,222	21	1,282

Ninety-five per cent. of the total number imported came from the United States as against 87 per cent. in the previous year.

Other articles.—Of the other articles of import not analysed in this chapter the more important are enumerated below :—

	Annual average of five years 1909-10 to 1913-14.	1916-17.	1917-18.
	Rs.	Rs.	Rs.
Matches	88,21,000	1,15,70,000	2,34,84,000
Woollen manufactures	3,08,38,000	1,97,04,000	2,09,72,000
Spices	1,54,72,000	1,94,54,000	1,90,14,000
Instruments, apparatus, etc.	1,35,82,000	1,75,14,000	1,72,45,000

Other articles.—Of the other articles of Import not analysed in this chapter the more important are enumerated below :—*continued.*

——	Annual average of five years 1909–10 to 1913–14.	1916–17.	1917–18.
	Rs.	Rs.	Rs.
Tobacco	71,07,000	1,25,13,000	1,69,97,000
Glass and glassware	1,61,92,000	1,50,09,000	1,62,46,000
Dyeing and tanning substances	1,33,01,000	1,14,73,000	1,41,10,000
Wood and timber	79,39,000	1,17,30,000	1,32,73,000
Apparel	1,46,67,000	1,57,92,000	1,29,61,000
Soap	61,87,000	1,00,97,000	1,13,34,000
Fruits and vegetables	1,07,72,000	1,16,92,000	1,03,18,000
Paints and painters' materials	71,00,000	1,14,80,000	96,73,000
Haberdashery and millinery	1,36,54,000	1,33,48,000	87,39,000
Articles imported by post	1,69,59,000	2,12,12,000	3,08,87,000

THE EXPORT TRADE.

Owing to the copious monsoon of 1917 and insistent demand for articles of national importance on the part of the Allies, the export trade of 1917-18 was satisfactory in spite of the scarcity in tonnage. The value of the exports of Indian merchandise was over Rs. 2,33 crores (233 millions). This was 1 per cent. below the value of the previous year but 6 per cent. above the annual average of the five years immediately preceding the war. The value was the highest ever recorded, with the exception of the two pre-war years 1912-13 and 1913-14 and the preceding year 1916-17. The course of the export trade since the beginning of the century is given below :—

	Rs. (lakhs).
Five years ending 1903-04	121,31
,, ,, ,, 1908-09	161,84
,, ,, ,, 1913-14(pre-war year)	219,50
,, ,, ,, 1917-18	216,94
Year 1913-14 (pre-war year)	244,20
,, 1914-15	177,48
,, 1915-16	192,53
,, 1917-18	237,07
,, 1917-18	233,44

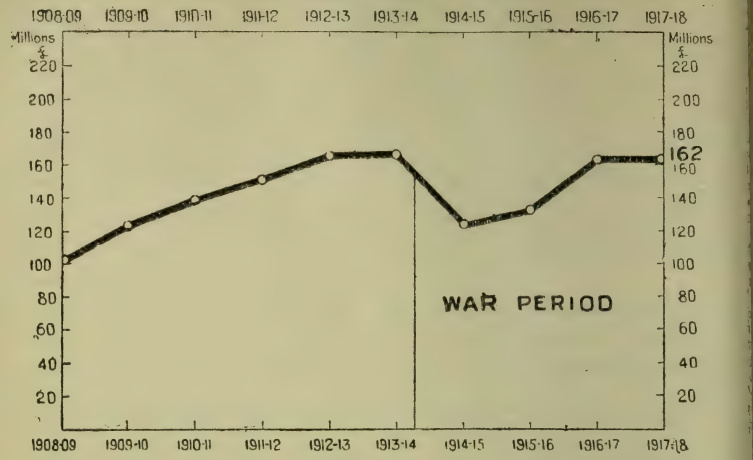
The significant features of the returns are (1) the large increase of 52 per cent. or over Rs. 18 crores in the value of food-grains exported : (2) the increase in the value of raw cotton and manufactured jute which rose by over Rs. 6 crores and Rs. 1 crore, respectively ; 3) the large decrease in raw jute a decrease of no less than 60 per cent. or Rs. 16 crores as compared with the exports of the previous year ; and (4) important decreases in seeds (Rs. 8 crores) and in raw hides and skins (Rs. 6 crores). India's six chief exports are in order of importance: cotton, raw and manufactures, grain, pulse and flour, jute, raw and manufactures, tea, hides and skins, raw and tanned, and seeds.

Cotton and cotton Manufactures.—The total value of raw cotton exported amounted to nearly Rs. 43 crores, and that of cotton manufactures to over Rs. 13 crores. The combined value was the highest recorded and amounted to nearly Rs. 56 crores, an increase of 13 per cent. as compared with the previous year and of 25 per cent. over the pre-war quinquennial average. The increase was almost entirely due to the high range of prices of raw cotton. The figures are as follows :—

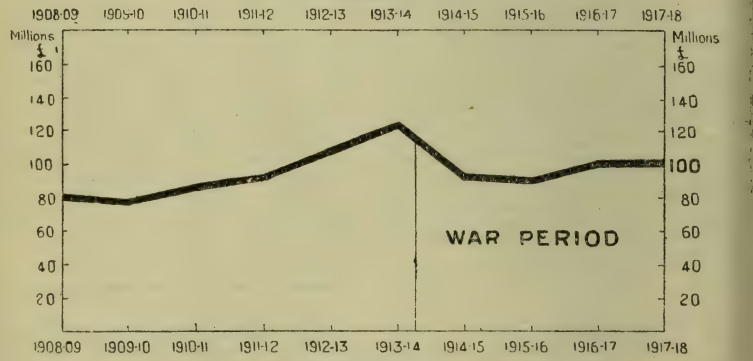
——	Cotton raw.	Cotton manufactures, including twist.	TOTAL.
	Rs.	Rs.	Rs.
Average of five years 1909-10 to 1913-14	33,27,83,000	11,40,54,000	44,68,37,000
Year 1916-17	36,10,13,000	13,64,26,000	49,74,39,000
,, 1917-18	42,65,74,000	13,33,45,000	55,99,19,000

Exports, Imports, and net Exports of private merchandise during the ten years ending 1917-18.

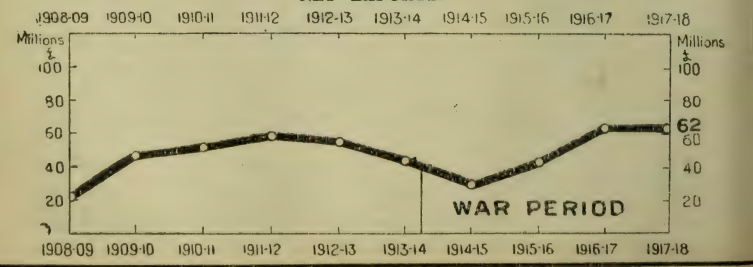
EXPORTS.



IMPORTS.



NET EXPORTS.



Raw Cotton.—The quantity of raw cotton xported in 1917-18 was 365,400 tons or 2,056,300 ales of 400 lbs. each. It was 18 per cent. below hat of the preceding year in tonnage and 15 er cent. below the pre-war quinquennial aver-ge. Before the war, 6 per cent. of the exports f raw cotton went to the British Empire, nearly 0 per cent. to the Allies of which Japan took 2 per cent. and 22 per cent. to enemy countries. n the year, more than 16 per cent. went to the Britich Empire, and 83 per cent. to the Allies, f which Japan took 71 per cent. Almost all he principal consumers of Indian cotton did ss trade with India during the year, except he United Kingdom which took 38 per cent. nore than in the preceding year. Japan im-orts as a rule 60 per cent. of its requirements rom India, 30 per cent. from America, and 5 er cent. each from Egypt and China. The ther principal consumers of Indian cotton, taly, France, China and Spain, also took smaller uantities, the decrease being very noticeable n regard to Spain. The outturn of the 1916-17 rop was 4,489,000 bales of 400 lbs., while the um of the net exports and internal consumption as 4,670,000 bales. The 1917-18 crop was stimated to yield 4,035,000 bales or 10 per cent. ss than the previous crop. Prices rose to a ery high level, as for example, the wholesale rice of Broach cotton per candy of 784 lbs. at Combay was Rs. 415 at the beginning of the ear. It soared to the extraordinary high level f Rs. 698 in March 1918 which is to be attri-uted chiefly to speculation. A part only of he inflated price might be reasonably considered o be due to the dear railway freights. The verage for the year was Rs. 507 as against s. 346 in 1916-17 and Rs. 303, the pre-war verage. Had the level of prices of 1916-17 revailed, the value would have been Rs. 29,60 akhs, instead of Rs. 42,66 lakhs, or in other ords, there was an increase of Rs. 13,06 lakhs ue to higher prices.

Cotton Manufactures.—The production and xport of Indian manufactures of cotton were uch above the pre-war average, although the high-water mark of the previous year was not reached, presumably to the check consumers placed on their purchases by reason of the grow-ing dearness of cloth which had necessarily to be manufactured from dearer raw staple.

Cotton yarn.—The production of yarn in Indian mills decreased to 661 million lbs. from 681 million lbs. in 1916-17. This was accom-panied by a depression in the export trade. The total quantity exported was 122 million lbs., a decrease of 28 per cent. as compared with 1916-17 and of 37 per cent. with the pre-war average. China, the principal market of Indian twist, took 81 per cent. of the total exports, but the quantity exported to that country decreased to the extent of nearly 42 million lbs. as compared with 1916-17. This was much below the pre-war normal. The fact may be reasonably ascribed to the comparatively cheaper cost of Japanese yarn which has for some years tho-roughly established itself in China. As com-pared with the preceding year the exports to Egypt and Siam increased, while those to the Straits Settlements, Persia, Arabia and the United Kingdom decreased. The total value of the exports amounted to over Rs. 7,56 lakhs, but had the price of 1916-17 prevailed, the value would have been Rs. 5,72 lakhs, or in other words, there was, due to higher prices, an in-crease of Rs. 1,84 lakhs.

Cotton goods.—The exports of Indian-made piece-goods were more than double the pre-war average, the exports amounting to over 189 million yards or more than 13 per cent. of the quantity imported from Lancashire. These exports were, however, 28 per cent. below those of the previous year for the reason stated above. Piece-goods accounted for 96 per cent. or Rs. 5,54 lakhs out of a total export of cotton goods, valued at Rs. 5,77 lakhs. Prices were higher than those in the previous year, and had the level of prices of 1916-17 prevailed, the value would have been Rs. 4,34 lakhs instead of Rs. 5,54 lakhs. In other words, there was an increase of Rs. 1,20 lakhs due to higher prices,

The following table compares the descriptions of cotton goods produced and exported :—

Production in the Indian mills.

GREY AND BLEACHED PIECEGOODS.	Average of five years 1909-10 to 1913-14.	1916-17.	1917-18.
	Millions of yards.	Millions of yards.	Millions of yards.
birtings and longcloth	288·1	427·8	450·6
dhutis	269·5	300·9	325·0
, cloth, domestics, and sheetings	139·8	192·1	137·4
hadars	64·1	67·8	54·0
rills and jeans	26·4	56·5	78·6
ther sorts	66·2	91·1	95·3
Total ..	854·1	1,136·2	1,140·9
COLOURED PIECEGOODS ..	251·4	441·9	473·1
Total piecegoods ..	1,105·5	1,578·1	1,614·4

Exports.

GREY AND BLEACHED PIECE-GOODS.	1913-14 (pre-war year).	1916-17.	1917-18.
	Millions of yards.	Millions of yards.	Millions of yards.
Shirtings	2·2	14·0	7·8
Chadars and dhutis	7·6	12·5	8·1
T. cloth and domestics	21·6	92·7	35·3
Drills and jeans	·6	1·6	1·0
Other sorts	12·2	38·3	26·6
Total ..	44·2	159·1	78·8
COLOURED PIECEGOODS ..	45·0	104·7	110·6
Total piecegoods ..	89·2	263·8	189·4

The production in 1917-18 rose by more than 500 million yards, or by 46 per cent. above the pre-war average. As compared with the preceding year the production of grey and bleached goods showed a small increase while there was an increase of over 7 per cent. in coloured goods. The increase in exports was entirely in grey goods. The quantity of coloured goods exported increased by nearly 6 per cent. Indian piecegoods compete with imported goods mainly in regard to grey goods, and the area of competition is in grey goods of the coarser counts of yarn, mainly grey shirtings, grey drills, and some classes of dhuties. Shipments of Indian cloth to almost all the principal purchasing countries decreased with the exception of Persia, Ceylon and Egypt. It will be seen from table No. 23 in Part II that business with Persia and Basra and other ports in the gulf has greatly increased since the outbreak of war. The share of Bombay in the exports of piece-goods was 84 per cent. as compared with 88 per cent. in 1916-17, and 71 per cent., the pre-war average, while that of Madras was 15 per cent. as against 11 per cent. in the previous year and 27 per cent., the pre-war normal. Karachi exported nearly one per cent. in the year under review.

Grain.—The quantity of food-grains exported showed an increase of no less than 54 per cent over the previous year, and 2 per cent. above the pre-war average. Large increases took place in the exports of wheat gram, barley, pulse, and maize. The details of the exports are shown in the appended table :—

———	Average of five years 1909–10 to 1913-14.	1916-17.	1917-18.
	Tons.	Tons.	Tons.
Rice, not in the husk	2,397,900	1,589,000	1,939,400
,, in the husk	41,600	50,800	25,200
,, flour	200	100	100
Wheat	1,308,00	748,900	1,454,400
,, flour	55,000	70,200	71,600
Barley	226,800	209,500	358,700
Gram	132,000	38,200	327,100
Pulse	158,900	167,900	229,700
Jawar and bajra	41,100	36,800	15,300
Maize	....	24,900	91,000
Other kinds	49,400	2,000	1,200
Total tons ..	4,410,900	2,937,800	4,513,700
Value Rs. ..	45,81,11,000	35,23,82,000	53,66,02,000

Foodgrains, bought by Government and shipped on Government or chartered vessels are not included in these exports. The value of the total exports increased by 52 per cent. to Rs. 53,66 lakhs, but had the level of prices of 1916-17 prevailed, the value would have been Rs. 53,91 lakhs. In short, there was a decrease of Rs. 25 lakhs due to lower prices.

Jute and Jute Manufactures.—The value of the exports of raw jute amounted to Rs. 6,45 lakhs, and manufactured jute to Rs. 42,84 lakhs. The combined value amounted to Rs. 49,29 lakhs, a decrease of 15 per cent. as compared with the previous year, but an increase of 16 per cent. over the pre-war average. The value was 21 per cent. of the total value of the exports of Indian merchandise as compared with 24 per cent. in the preceding year, and 19 per cent., the pre-war average. The decrease compared with the preceding year, as will be seen from the following table, was due entirely to the decrease in the exports of raw jute :—

	Average of five years 1909-10 to 1913-14.	1916-17.	1917-18.
	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).
Jute, raw	22,20	16,29	6,45
,, manufactures	20,25	41,67	42,84
TOTAL	42,45	57,96	49,29

Raw Jute.—The main feature of the trade was a considerable decrease in the quantity exported which amounted to 278,100 tons, the lowest on record since 1877-78. The exports were prohibited to all destinations except under license granted by the chief customs officer at the place of export. There was a fall in quantity of 48 per cent. as compared with the previous year, and of 64 per cent. with the pre-war quinquennial average. The value of the exports decreased by 69 per cent. to Rs. 6,45 lakhs. Had the level of prices of 1916-17 continued, the value would have been Rs. 8,39 lakhs, or in other words, there was a decrease of Rs. 1,94 lakhs due to lower prices.

Jute Manufactures.—One of the chief features of the trade in 1917-18 was the rise in the price of the manufactured article. The value of the exports, notwithstanding the decrease in the quantities shipped, rose by 3 per cent. to nearly Rs. 43 crores, a figure more than double the average value of the exports in the pre-war quinquennium. There were 76 mills at work with 40,639 looms and 834,055 spindles. The number of persons employed was 266,038. In the pre-war year 1913-14 the number of mills was 61 with 36,050 looms and 744,289 spindles. Difficulties with freight and exchange prevented free exports of jute manufactures with the result that the Bengal mills worked only 5 days per week instead of 6 during the first nine months of the period under review. Since January, however, they have resumed full time working. An estimate of the jute profits was made from a detailed analysis of the published accounts of 42 companies, 36 of which were registered under the Indian Companies Act, four in Scotland, one in England and one in France, its factory being situated at Chandernagore. The compilation of the data was made uniform as far as practicable, and the 42 companies were regarded as one concern. In all cases the profits were shown after deduction of Indian Income Tax and Super Tax because the amount of tax paid was not always shown separately in the balance sheets but lumped with other items of expenditure under the head of "Manufacturing and other expenses." In the case of sterling companies, the British Income Tax and British excess profits duty were deducted as well as the Indian Income Tax and Super Tax. The profits are shown before and after deduction of interest on debentures. Some companies have paid off their debentures, others are paying off these, while others again have created debenture redemption funds out of surplus profits. Debenture interest is not shown separately in all the published accounts, but the amounts were ascertained as correctly as possible. No allowance has been made for depreciation as no uniform practice of writing off depreciation is followed by jute mills in Bengal. The results are summarised in the following table :—

Profits of Jute Mill Companies after deduction of Income tax, Super tax and also, in the case of sterling companies, excess profits duty.

	1914.	1915.	1916.	1917.
	£	£	£	£
Total profits	982,000	4,820,000	6,309,000	4,447,000
Debenture interest	159,000	159,000	154,000	142 000
Net profits (subject to depreciation) ..	823,000	4,661,000	6,155,000	4,305,000
Ratio of net profits (No. 3) to paid-up capital	10	58	75	49

Hides and skins.—The main features of the year's trade were a considerable decrease in the exports of raw hides, an increase in the exports of tanned hides, and a decrease in the exports of raw and tanned skins. The quantity of raw hides exported was less than one-half of that of the preceding year and only 42 per cent. of the pre-war average. Of these, exports of cow-hides amounted to 15,879 tons, valued at Rs. 2,32 lakhs, being 54 per cent. of the preceding year's exports of 29,082 tons, valued at Rs. 5,00 lakhs.

Oil-seeds.—The main features of the trade were (1) the remarkable fall in the exports which were the lowest on record since 1879-80, and (2) the large increase in the share of the United Kingdom in the trade as compared with the pre-war period. The exports amounted to 457,700 tons, a decrease of 51 per cent. as compared with 1916-17, and of 63 per cent. with the pre-war average. The value of these exports amounted to Rs. 8,22 lakhs, and had the level of prices of 1916-17 prevailed, the value would have been Rs. 8,04 lakhs or in other words, there was an increase of Rs. 18 lakhs due to higher prices.

Raw wool.—The exports abroad of raw wool excluding re-exports amounted to nearly 43 million lbs., a decrease of 13 per cent. as compared with the previous year, and of 22 per cent as compared with the pre-war average. The decrease was due to the greater consumption of Indian wool in the country both by woollen mills and by handloom weavers, engaged in the manufacture of blankets and other Army material. The exports were made entirely to the United Kingdom. The value of these exports amounted to Rs. 4,07 lakhs, and had the previous year's prices prevailed, the value would have been Rs. 3,36 lakhs, *i.e.*, there was an increase of Rs. 71 lakhs due to higher prices.

Other articles.—Of the other articles not analysed in this chapter, the more important articles are enumerated below:

———	Average of five years 1909-10 1913-14.	1916-17.	1917-18.
	Rs.	Rs.	Rs.
Lac	2,20,15,000	2,80,32,000	3,77,78,000
Metals and Ores—			
Manganese Ore	98,64,000	1,25,42,000	85,67,000
Wolfram	....	1,05,000	1,08,66,000
Others	70,40,000	1,41,37,000	99,95,000
Opium	9,96,17,000	2,09,65,000	2,40,77,000
Dyes—Indigo	29,92,000	2,11,26,000	1,52,81,000
,, Other sorts	85,00,000	91,75,000	69,77,000
Oils	91,90,000	1,51,61,000	2,05,98,000
Rubber	39,38,000	1,58,44,000	1,62,36,000
Paraffin wax	54,99 000	1,01,69,000	1,10,99,000
Spices	85,88,000	1,09,53,000	1,09,20,000
Saltpetre	34,99,000	1,05,55,000	88,74,000
Coffee	1,37,52,000	1,07,68,000	99,31,000
Hemp, raw	78,27,000	1,64,12,000	79,44,000
Mica	35,87,000	51,19,000	86,29,000
Provisions and oilman'sstores.	45,63,000	71,01,000	70,37,000
Coal and coke	75,77,000	76,22,000	23,90,000
Articles exported by post ..	90,76,000	1,39,98,000	1,46,39,000

THE DIRECTION OF TRADE.

The direction of trade is of unusual interest as it shows the effect of the war in increasing the trade of India with other parts of the British Empire. In the year ending 31st March 1918, the share of the British Empire rose to 57 per cent. from 53 per cent. in the pre-war quinquennium, while that of foreign countries decreased to the corresponding extent (4 per cent.) from 47 per cent. to 43 per cent. Another noticeable feature of the trade is the extent to which the place of enemy countries has been taken by the British Empire and the Allies. Over 11 per cent. of the total trade of India in the pre-war period was with enemy countries, and this has now been taken partly by the British Empire and also by Japan and the United States. In imports, the share of the British Empire decreased from a pre-war normal of 70 per cent. to 64 per cent. in 1917-18. This was chiefly due to the decrease in the imports from the United Kingdom, the producing capacity of which was confined largely, if not entirely, to commodities

of national importance. The share of other parts of the British Empire and of the Allies increased, while that of neutrals, although less than that of the previous year, exceeded the pre-war average. In the pre-war period, enemy countries had 9 per cent. of the import trade of India, and their place has been taken mainly by Japan and to a less extent by the United States. Before the war, iron and steel manufactures, glass and glassware, synthetic dyes, hardware, machinery and mill-work, paper and paste-board, building and engineering materials, and coloured cotton piece-goods were largely imported from enemy countries. There has been a considerable increase in the imports of these commodities from Japan and from the United States. In the direction of the export trade there has also been an important change since the outbreak of war. In the pre-war period, the total share of foreign countries was no less than 58 per cent. of the total exports. Enemy countries took nearly 14 per cent. of the exports, chiefly raw materials for their industries, for example, 27 per cent. of the exports of raw jute, 21 per cent. of raw cotton, 15 per cent. of oil-seeds, and 37 per cent. of raw hides and skins. In the year under review, the share of the British Empire in the export trade has risen to 53 per cent. from nearly 42 per cent. in the pre-war period. The place of enemy countries has been taken in the export trade mainly by the British Empire. The following table illustrates the percentage shares of the United Kingdom, other parts of the British Empire, the Allies, and Neutrals in the trade of India in the year under review as compared with the previous year and the pre-war quinquennium :—

	Imports.			Exports.			Total Trade.		
	Pre-war average	1916–17	1917–18	Pre-war average	1916–17	1917–18	Pre-war average	1916–17	1917–18
	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.
United Kingdom ..	63	59	54	25	33	26	40	43	37
British Possessions .	7	7	10	17	17	27	13	13	20
Total British Empire	70	66	64	42	50	53	53	56	57
Allies	11	21	24	35	40	37	26	33	32
Neutrals	10	13	12	9	10	10	10	11	11
Enemy countries ..	9	..	..	14	..	..	11	..	..
Total Foreign countries.	30	34	36	58	50	47	47	44	43
Total value of trade in thousands of £	97,231	99,757	100283	149411	163434	161704	246642	263119	261987
Total value of trade in lakhs of Rs. ..	1,45,85	1,49,63	1,50,42	2,24,12	2,45,15	2,42,56	3,69,97	3,94,78	3,92,98

FRONTIER TRADE.

The frontier trade of British India is carried on with adjoining countries across a land frontier of no less than 6,800 miles, or slightly greater than the distance between Bombay and London via the Canal route. The total value of the trade in 1917-18 was the highest on record and amounted to Rs. 28 crores, an increase of 22 per cent. over the previous year, and of 50 per cent. over the pre-war quinquennial average. The value of this trade is, however, comparatively small as it was only 6 per cent. of the total value of the sea-borne trade in the year under review.

The following table shows the total value of both merchandise and treasure :—

	Imports.	Exports.	Total.
Average of the five pre-war years 1909-10 to 1913-14 ..	Rs. 10,30,83,000	Rs. 8,59,28,000	Rs. 18,90,11,000
Year 1916-17	12,83,65,000	10,34,69,000	23,18,34,000
,, 1917-18	14,77,58,000	13,55,17,000	28,32,75,000

CUSTOMS REVENUE.

The rates of customs duty on imported articles remained unchanged as did also the duties on exports, namely, those on jute, rice and tea. The total gross sea and land customs revenue (excluding salt revenue) amounted to as much as Rs. 16,57 lakhs, an increase of Rs. 3,58 lakhs or 28 per cent. over the preceding year, and of Rs. 6,73 lakhs or 68 per cent. over the pre-war quinquennial average. Of the total revenue realised in 1917-18, import duties contributed Rs. 12,00 lakhs or 72 per cent., export duties Rs. 3,32 lakhs or 20 per cent., the excise duty on cotton manufactures Rs. 78 lakhs or 5 per cent. and on motor spirit Rs. 25 lakhs or 2 per cent., land customs and miscellaneous yielded approximately Rs. 22 lakhs or one per cent. The jute cess which was introduced in 1912 for the benefit of the Calcutta Improvement Trust amounted, in the year under review to Rs. 7,40,000, and the tea cess collected by Government on behalf of the tea industry to Rs. 3,55,000.

SHIPPING.

The total register tonnage of vessels including native craft was 10,868,000, a decrease of 9 per cent. as compared with the preceding year, and of 33 per cent. with the pre-war quinquennial average. Steamers accounted for 95 per cent. of this total, and sailing vessels 5 per cent. The average tonnage per steamer was 1,868 in 1917-18 as against 1,979 in the previous year and 2,582, the pre-war average. The total number of vessels, however, increased to 11,459 from 10,386 in 1916-17 and 8,567, the pre-war average. The clearances of vessels with cargoes and in ballast engaged in overseas trade were—

Tonnage clearances with cargoes and in ballast.

	Average of five years 1909-10 to 1913-14 (Peace conditions).		1916-17 (War conditions).		1917-18 (War conditions).	
	Tons.	(per cent.)	Tons.	(per cent.)	Tons.	(per cent.)
British ships (including British Indian)	6,412,000	(79)	4,881,000	(81)	3,990,000	(71)
Foreign ships	1,688,000	(21)	1,182,000	(19)	1,628,000	(29)
Total ..	8,100,000	(100)	6,063,000	(100)	5,618,000	(100)

There has thus been a decrease of 30 per cent. in the clearances of 1917-18 as against the pre-war average. This shows clearly the difficulties in regard to tonnage and the surprising fact is not that the tonnage figures were so low but that, all things considered, they were so high.

GOLD AND SILVER (COIN AND BULLION).

A special feature of the year was the issue of the Gold (Import) Ordinance No. III of 1917, for the acquisition by Government of gold imported into British India. Gold thus acquired has been recorded as private imports since such imports were brought into India by banks, etc., in the ordinary way for the partial liquidation of the excess of exports over imports. In regard to silver, an Ordinance (No. IV of 1917) was similarly issued on the 11th July, 1917, but this was not re-enacted, and no silver was acquired under this Ordinance.

Gold.—The imports of gold on private account showed a great increase over those of the preceding year, although still much below the pre-war average. The net imports of gold on private account amounted to Rs. 19,94 lakhs (£13 millions) as against Rs. 13,28 lakhs (£ 9 millions) in 1916-17, and Rs. 28,86 lakhs (£ 19 millions), the pre-war average. These figures take into account the imports and exports of gold bullion into and from Bombay on behalf of the Bank of England which, however, do not affect India's balance of trade. Such gold is not in settlement of India's trade balance, but is imported, refined, and warehoused in Bombay on behalf of the Bank. The imports on Government account consisted mainly of sovereigns and the net imports on Government account in 1917-18 were valued at Rs. 5,24 lakhs (£3,493,000) as against a net export of Rs. 4 lakhs (£27,000) in the previous year and of Rs. 71 lakhs (£477,000), the pre-war average. The absorption of gold coin and bullion was Rs. 15,33 lakhs (£ 10,221,000). During the last quinquennium, that is from 1913-14, India has absorbed not less than £ 54 million worth of gold or over one-half of the world's yearly production.

Silver.—In regard to silver, the price again advanced and the price per ounce in London was 36*d.* on 1st April, 1917, and rose to 55*d.* by the 21st September, a figure that has not been exceeded since February 1878. On 1st April 1918, the price was 45⅝*d.* The imports of silver on private account were above those of the previous year but much lower than the pre-war average, while those on Government account were less than in the previous year but considerably above the pre-war average. The net imports of silver on private account amounted to Rs. 68 lakhs (£457,000) in the year under review as against a net export of Rs. 3,32 lakhs (£2,213,000) in 1916-17. The export of piastres coined in the Bombay Mint on behalf of the Egyptian Government are included in the above figures, but these do not affect India's balance of trade as the coinage was from silver imported on Government account. In the pre-war quinquennium the annual average net imports of silver on private account were Rs. 7,21 lakhs (£4,806,000). The net imports on Government account in 1917-18 were valued at Rs. 18,36 lakhs (£12 millions), as against Rs. 22,12 lakhs (nearly £ 15 millions) in 1916-17 and Rs. 3,52 lakhs (over £2 millions), the pre-war average. The net imports of silver during the last quinquennium amounted to £ 44 millions, or nearly twice the world's yearly production.

THE BALANCE OF TRADE.

The main features are as follows:—

	Pre-war average.	Preceding year.	Year under review.
	£(1,000)	£(1,000)	£(1,000
Gross exports—private merchandise	149,411	163,434	161,703
Gross imports— ,, ,, ...	97,232	99,757	100,283
Net exports ,, ,, ...	52,179	63,677	61,420
Imports of Treasure and funds (private account)	52,464	33,282	49,830
(*a*) Net imports of Gold	19,242	2,797	14,306
(*b*) ,, ,, Silver	4,806	—1,440	971
,, ,, Treasure ..	24,018	1,357	15,277
(*c*) ,, ,, Government Securities ..	878	542	737
(*d*) Council Bills	27,538	31,383	33,816
ance of trade in favour of India..	..	30,395	11,590
,, ,, against India	285	..	..

The record gap between exports and imports of private merchandise was a unique feature of the previous years' trade. In the year under review, the gap decreased by over £2,000,000 to over £61 millions. Nevertheless, the difference was higher than the pre-war average by £9,241,000. The net import of gold and silver during the year was £ 15,277,000 as against £ 1,357,000 in the preceding year. These figures exclude such transactions as the imports and exports of gold bullion on behalf of the Bank of England and the exports of coined silver on behalf of the Egyptian Government. The net imports of those securities which are known (*i.e.*, only those which pass through the Public Debt Office) increased. Council Bills paid in India amounted to £ 33,816,000, a record figure, as against £ 31,383,000 in 1916-17, and £ 27,569,000 the pre-war average. The net balance in favour of India was £ 11,590,000 as against £ 30,395,000 in 1916-17, £17,153,000 in 1915-16, and £ 17,852,000 in 1914-15. The pre-war average was £ 285,000 against India.

ABSORPTION OF GOLD (both coin and bullion) IN INDIA.

(*In thousands of £ sterling.*)

	1873-74.	Average of 5 years ending 1878-79.	1883-84	1888-89.	1893-94.	1898-99.	1903-04.	1908-09.
	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)
1. Production ..	..	..	..	..	463	1,226	1,967	2,267
2. Imports ..	..	..	..	..	2,857	3,403	8,667	11,233
3. Exports ..	..	..	..	..	1,310	1,894	4,547	5,000
4. Net imports (*i.e.*, 2—3)	1,285	594	3,394	2,297	1,547	1,509	4,120	6,233
5. Net addition to stock (*i.e.*, 1+4)	1,285	594	3,394	2,297	2,010	2,735	6,087	8,500
6. Balance held in mints and Government Treasuries and Currency and Gold Standard Reserves	..	..	..	..	..	439	8,587	4,380
7. Increase (+) or decrease (—) in stock held in mints etc., as compared with the preceding year	..	..	..	..	..	+405	+1 780	—2,167
8. Net absorption (*i.e.*, 5—7) ..	1,285	594	3,394	2,297	2,010	2,330	4,307	10,667
9. Progressive total of additions to stock	1,285	3,963	12,504	25,766	34,853	37,650	67,460	105,873
10. Net progressive absorption ..	1,285	3,963	12,504	25,766	34,853	37,211	58,873	101,493

Absorption of Gold (both coin and bullion) in India—*continued.*

	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	Average of 5 years ending 1913-14.	1914-15.	1915-16.	1916-17.
	£	£	£	£	£	£	£	£	£
	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)
1. Production ..	2,207	2,200	2,240	2,273	2,293	2,243	2,340	2,367	2,303
2. Imports ..	16,687	18,594	27,660	27,527	18,820	21,858	7,133	3,520	2,839 (*a*)
3. Exports ..	2,234	2,607	2,487	4,680	3,267	3,091	2,040	4,260	67
4. Net imports (*i.e.*, 2—3)	14,453	15,987	25,173	22,667	15,553	18,767	5,093	—740	2,772
5. Net addition to stock (*i.e.*, 1+4)	16,660	18,187	27,413	24,940	17,846	21,010	7,433	1,627	5,075
6. Balance held in mints and Government Treasuries and Currency and Gold Standard Reserves	6,427	6,487	15,827	19,960	15,000	12,740	10,386	8,428	8,110
7. Increase (+) or decrease (—) in stock held in mints, etc., as compared with the preceding year	+6,340	+60	+9,340	+4,133	—4,960	+2,983	—4,614	—1,958	—318
8. Net absorption (*i.e.*, 5—7) ..	10,320	18,127	18,073	20,807	22,806	18,027	12,047	3,585	5,393 (*a*)
9. Progressive total of additions to stock	140,227	158,414	185,827	210,767	228,613	184,770	236,046	237,673	242,748
10. Net progressive absorption ..	133,800	151,927	170,000	190,807	213,613	172,029	225,660	229,245	234,638 (*a*)

Note.—The figures in this table have been revised. The quinquennial average figures are inserted only for comparative purposes. The progressive total of additions to stock (item 9) and net progressive absorption (item 10) are calculated on the annual figures and are not based on these averages. Item 9 is the sum of the yearly figures in item 5 and item 19 the sum of the yearly figures in item 8.

(*a*) Excludes gold imported from Natal and warehoused in Bombay on behalf of the Bank of England.

COMMERCIAL INTELLIGENCE SYSTEM.

The Commercial Intelligence Department, India, was founded in 1905 under the control of a Director General of Commercial Intelligence. Its primary object was the supply to the public of such information as would stimulate Indian trade development. Since April, 1914, the compilation and issue of official statistics of India have been carried out by the Department of Statistics, India, under the control of a Director of Statistics.

As now constituted the Department serves the purpose of a Central Bureau at which information on subjects of commercial interest is collected and disseminated to the public, and from which replies are posted to enquiries by business men on commercial matters. It is situated at 1, Council House Street, Calcutta, the headquarters of the Director-General. The information collected by the Department and intended for general publication is printed in its weekly official organ, the "Indian Trade Journal." The principal features of the "Journal" are (*a*) information as to Tariff Changes in the United Kingdom and elsewhere which affect Indian interests, (*b*) Summaries of the leading features of consular and other trade reports, (*c*) Abstracts of the proceedings of the various Chambers of Commerce in India, (*d*) Abstracts of crop reports and forecasts. (*e*) Government orders, *communiques* and other notices affecting trade, and (*f*) anonymous enquiries for securing trade introductions. It also contains analyses of Indian trade statistics.

A Commercial Museum has been permanently organised as a part of the Commercial Intelligence Department with the object of bringing together purchasers and suppliers of Indian manufactures. It thus supplements the existing resources of the Department as a bureau of information, and stimulates the development of the natural resources of the country. The Museum contains samples of such goods of Indian manufacture as have been received for exhibition together with information as to prices and the names of the manufacturers and commercial agents. The exhibits have been carefully grouped and catalogued. Order books are available in which orders may be registered direct with the manufacturers or their respective commercial agents. An Enquiry Office is attached to the Museum, which is also located at 1, Council House Street, Calcutta, and is open on week days from 10-30 a.m. to 5-30 p.m. and on Saturdays from 10-30 a.m. to 2-30 p.m. *Admission Free.*

Department of Statistics.—This was originally created in 1895 and in 1914 was re-created and re-organised. It is officially under the Department of Commerce and Industry but compiles and publishes reports and returns under the orders of other executive departments.

It is divided into two main divisions, each under a Superintendent. The first division consists of six sections and the second division of four sections.

Section I, the Registry Section, deals with the receipt and issue of letters, pay, pensions, distributions of publications, record and library; Section II deals with Prices, Rate Lists and Freights; Section III with Wage Statistics; Section IV, Judicial, Administrative, Educational and Vital Statistics; Section V, Rail and River Borne Trade; Section VI, Statistics relating to the Inland and Frontier trade of Bengal; Section VII, perhaps the most important section in the whole Department, the Sea-borne Trade section, which compiles the All India Sea-borne Trade Returns including Coasting Trade, Treasure, Shipping, and Customs duties; Section VIII deals with Frontier Trade; Section IX with the Agricultural Returns, Crop Forecasts, Cotton Press Returns, etc; Section X deals with Commercial and Financial Statistics.

Director of Statistics:—G. Findlay Shirras, 1, Council Street, Calcutta.

ADULTERATION OF PRODUCE.

In August 1917 the Department of Commerce and Industry, Government of India, issued a long memorandum to Chambers of Commerce in India on the subject of the adulteration of Indian produce. This memorandum said:—Cotton is still watered; jute is still watered; groundnuts, hides, indigo, oils are freely adulterated; this at least is common knowledge. It is unnecessary to dilate on the loss to Indian trade which this practice of adulteration must involve, but it appears to the Government of India to be specially important at the present time to endeavour to focus attention on the matter. It seems reasonable to suppose that the present war will be followed by a period of keen competition among industrial nations for materials of all descriptions and for products which India should be in a specially favourable position to supply. But it cannot be expected that India will be able to capture and retain the extended markets which should fall to her share, if steps are not taken to effect a radical improvement in the reputation which, the Government of India fear, some of her products have only too justly merited.

Attitude of Government.—After reviewing the facts concerning the adulteration of wheat, cotton, jute, leather, hemp, and bees' wax the memorandum continued:—It will be seen from the preceding sketch of previous discussions on this subject that the Government of India have been consistently opposed to any attempt to meet the evil by legislative measures. They have held the view that any such measures would be extremely difficult to carry into effect, would seriously hamper trade, and would probably, in any case, prove ineffectual as a practical remedy.

They have maintained the opinion that the proper agency for dealing with these abuses is the trade itself, and that no intervention on the part of Government is desirable. To these views they are still inclined to adhere. At the same time, they would welcome any suggestions on the subject, and would be glad to co-operate, if further discussion should show that any action on their part is at once feasible and desirable. It seems to them, however, more probable that the situation could be most satisfactorily dealt with without any intervention on the part of Government. If the leading exporting firms of any particular commodity in India would arrange with their leading buyers that the latter should insist on freedom from adulteration, an improvement could probably be more readily effected by this means than by any action on the part of Government. This would seem to be the most fruitful line of attack, but it has also been suggested that Chambers of Commerce in India might organise some system of certifying to the purity of products before export. This suggestion seems worthy of consideration.

Adulteration of Ghee.—In the autumn of 1917, considerable feeling was evoked in Calcutta by the practice of adulterating ghee. For instance, a panchayat of Marwaris excommunicated five ghee dealers, in one case two partners were excommunicated for one year and ordered to pay Rs. 1,00,000 towards the purchasing of grazing ground for cattle. In another case a father and son were fined Rs. 25,000 and in other cases the fines ranged from Rs. 500 to Rs. 1,000. Feeling waxed so strong that a deputation asked the Governor to move the Government of India to pass an ordinance, pending legislation, penalising both the adulteration of ghee and the selling or stocking of adulterated ghee. Shortly afterwards an Emergency Bill was introduced, by Sir S. P. Sinha, in the Bengal Legislative Council, to amend the Calcutta Municipal Act, with special reference to ghee adulteration. Sir Satyendra, in introducing the Bill, said that the existing law had failed to check the practice of adulterating ghee and selling adulterated ghee in Calcutta. In view of the evils resulting from widespread adulteration it was considered necessary that more stringent measures should be taken to provide for the purity of the article and to penalise the manufacture, storage, and sale of ghee that was adulterated. In this Bill a definition for adulteration had been introduced by which ghee must not consist of any article which was not extracted from milk. The penalty imposed under the Bill for offences ranged from a fine of Rs. 200 to Rs. 1,000. The Bill was taken up for consideration after suspending the rules of business and passed.

Burma Ghee Adulteration Act.—In Burma a similar Bill was passed in October, 1917, when the mover of the Bill explained that all that the Bill proposed was to ensure that a purchaser who desires to obtain ghee should be entitled to receive an article which was derived exclusively from milk. If purchaser desired a cheaper substitute, the Bill did not prevent him from obtaining it. It did, however, prevent him from receiving such substitute under the impression he was purchasing ghee. It was not anticipated that the Bill would effect any dislocation of any established trade. It would be necessary for manufacturers and dealers of mixtures which had hitherto been sold under the name of ghee to arrange to sell such mixture under distinctive names in order that the customer might be fully aware he was not purchasing ghee. If such names were speedily adopted, the evils resulting from the sale of these mixtures as ghee would be prevented without any loss or dislocation of industry.

THE CIVIL VETERINARY DEPARTMENT.

To the Civil Veterinary Department, which originated in 1892 as an expansion of the military horse-breeding department, is entrusted the performance or supervision of all official veterinary work in India, other than that of the Army. Its duties fall under the main heads of cattle disease and cattle breeding, horse and mule breeding, and educational work in veterinary colleges.

In 1905 and the following years both the superior and the subordinate establishments were considerably increased; but the strength of the subordinate staff in most provinces was still far short of the sanctioned establishment, the demand for veterinary graduates being greater than the supply, and the European staff remained small in proportion to the volume of work calling for attention. The post of Inspector-General, Civil Veterinary Department was abolished with effect from the 1st April 1912, the duties being transferred partly to local Governments and partly to the Agricultural Adviser to the Government of India. Of late years small veterinary departments, modelled on the Civil Veterinary Department were started in several native states.

INDIAN COTTON DUTIES ACT.

The origin of this fiscal measure dates back to 1894 when the embarrassment caused to the finances of India by the fall in exchange drove the Government of India to the necessity of adopting measures to increase their sources of revenue. Among these measures was the re-imposition of the Customs Tariff which had been in force prior to 1882 subject, however, to this difference that cotton yarns and fabrics, which had formerly been subjected to an import duty, were in 1894, excluded from the list of dutiable articles. This partial re-imposition of import duties had been recommended by the Herschell Commission which, in reporting in 1893 on the currency question, had favoured this method of adding to the revenue as being the least likely to excite opposition. In point of fact, however, this recommendation which was carried into effect in the Indian Tariff Act of March 1894 gave rise to very marked opposition. In support of their policy the Government appealed to the Resolutions passed in 1877 and reaffirmed in 1879 by the House of Commons, the first of which had condemned the levy of import duties on cotton fabrics imported into India as "being contrary to sound commercial policy," while the latter called upon the Government of India to effect "the complete abolition of these duties as being unjust alike to the Indian consumer and to the English producer." It was, however, an open secret that the decision to exclude from the list of dutiable articles cotton yarns and fabrics was not the decision of the Government of India but that of the Secretary of State. It was pertinently pointed out that the volume of trade in cotton goods and yarns then represented nearly one-half of the total imports from abroad, and that the exemption of these important commodities single other important commodities when practically every single other commodity was being subjected to an import duty could not be ustified on its merits as a sound fiscal measure, much less when it was an admitted fact that he Budget would still show a deficit.

Excise Duties Imposed.—The opposition to this measure, though it failed to secure its rejection in the Legislative Council, was strong enough to induce the Secretary of State to reconsider the matter. Yielding to the united representations of the Government of India and of Indian public opinion, His Majesty's Government eventually agreed to the re-imposition of import duties on cotton yarns and fabrics provided that it could be shown that such a measure was necessitated by the position of Indian finances, and that it was combined with an Excise duty which would deprive the import tax of any protective character. Accordingly in December 1894, consequent on the further deterioration in the financial position, two bills were introduced in the Legislative Council. The first of these subjected cotton yarns and fabrics to the general import duty of 5 per cent. *ad valorem*. The second imposed an Excise duty on all cotton yarns of 20's and above produced by Mills in British India. In introducing this latter Bill the then Finance Minister, Sir James Westland, was careful to explain hat the policy underlying its provisions had been imposed on the Government of India by the Secretary of State in pursuance of the Resolution of the House of Commons quoted above. The provisions of this particular Bill are of little interest. From the first it was recognised that they were unpractical, Lancashire and Indian spinners disagreed as to the point at which the line should be drawn exempting Indian yarns from the Excise Duty. Practical difficulties were pointed out by Indian spinners as to the impossibility of spinning precisely to a particular count. From the Lancashire point of view it was contended that the Bill offered facilities for evasion while it was admitted that under the system adopted in the Bill, the taxation of Indian and Lancashire products was not being carried out on a similar basis.

Act of 1896.—The Act was in fact doomed to be short-lived, and in December 1895 the Government of India were compelled to re-consider the whole position and to introduce an entirely new measure which became law in January 1896 as the Indian Cotton Duties Act II of 1896. This measure proceeded from two conclusions, namely, that no attempt should be made to obtain any duty from yarns whether imported or locally manufactured, and that an equal rate of duty should be applied to all woven goods whether imported or of Indian origin. With the object of conciliating the opposition, the rate of duty was fixed at 3½ per cent. as opposed to the general rate of Customs duty of 5 per cent. The main provisions of the Act provided that the assessment for the purposes of collecting the Excise duty should be based on returns submitted by the mill-owners; and that provision should be made for a rebate in the case of woven goods exported out of India. No control beyond a requirement that statistical returns should be furnished was attempted in respect of spinning mills. On the other hand certain concessions in the matter of import duty on Mill stores were made by executive order so as to place Indian Mills on a footing more or less equal to their Lancashire competitors.

Criticisms of the Measure.—It is not possible within the limits of the present article to do more than summarise the criticisms with which this measure was received in India. Much of the opposition was based on grounds of a transient character; as for instance that the Indian industry was then in a state of continued depression and that it had been hard hit, particularly in respect of its export trade, by the currency legislation, and by the uncertainty as to the fiscal policy of Government. In some quarters objection was offered to the exemption of yarn, which it was alleged, would place the Indian hand weaving industry at an advantage with the Indian power weaving industry. But the hostility to this measure, as also to the earlier measures already described, clearly proceeded from the feeling that the policy of the Government of India and of the Secretary of State had been dictated by Lancashire, and that the action of Lancashire was due not so much to the fact that there was any real competition between Indian and Manchester goods, but to a desire to handicap the Indian industry

whose progress was already causing uneasiness to Lancashire interests. It was argued that the imports from Lancashire were practically all of the higher counts, which, for climatic and other reasons, Indian mills could not produce ; that in any case the advantage to the Indian millowner of the import duty was inconsiderable and was counterbalanced by certain drawbacks, arising from the inferiority of Indian labour, which could not be overcome ; and that this advantage, such as it was, could scarcely be said to have a protective character, in view of the higher cost of initial equipment in the case of an Indian mill which has to import its machinery, and of working expenses consequent on the scarcity of skilled labour and on the necessity of importing stores required in the production of cloth. Finally, from the standpoint of the consumer, very severe criticism was directed against the reduction, in favour of imported cotton goods, of the general rate of duty from 5 per cent. to 3½ per cent. on the ground that the effect of the legislation would relieve the richer classes who were consumers of the finer Manchester fabrics and impose new taxation on the poorer classes whose requirements were met by the Indian mills.

New Factors in the Situation.—Since the passing of this measure into law the policy of the Government of India in this respect has frequently been the subject of attack in the press and in the Legislative Councils while it has also formed the subject of continued representations by the industrial interests affected and political organizations. In more recent years the agitation in favour of the abolition of the Excise duties has been revived by the growth in England of a strong body of public opinion in opposition to the policy of Free Trade. Advantage has been taken of this new phase in English economic thought to press on behalf of India the acceptance of a policy of Protection and the removal of the Excise duties is now claimed by the opponents to this measure as a necessary corollary of the application to the British Empire of the principles associated with the name of Mr. Chamberlain. A new factor in the situation which has strengthened the position of those who are in opposition to the Excise duties is to be found in the severe competition which Indian mills have to face in China as well as in India from the Japanese industry. The Japanese market was lost to India in the early years of this century. More recently, however, Japan has entered as a competitor with India into the China market, while within the last few years it has pushed its advantage as against the Indian millowner in the Indian market itself. Again it is claimed that the recent enhancement of the silver duty has materially affected the position of the Indian spinner who relied on the China market. On two occasions within the last five years the question of Excise duties has come prominently to the front as a result of debates in the Viceroy's Council. The official attitude is firmly based on the position that the Excise duties stand and fall with the import duties. Against such an attitude all arguments based either on the advantages of a Protectionist as opposed to a Free Trade policy or on the handicap to which the present system exposes the Indian millowner can, of course, make no head way. The Government of India are confronted with a heavy recurring loss in their revenues as a result of the abolition of the opium traffic.

Policy of 1917.—The policy of Government towards the Cotton Duties underwent a further development in 1917. In the budget of that year provision was made for interest and sinking fund charges on £ 100 millions, the contribution of India towards the cost of the war. This demanded in addition to the natural increase in the revenues fresh taxation to the extent of £ 3 millions per annum. Amongst the expedients adopted to produce this revenue was the raising of the import duty on cotton goods from 3½ per cent. to 7½ per cent. which is the general tariff rate. At the same time the cotton excise duty was fixed to remain at the previous figure of 3½ per cent. thus giving the indigenous industry a slight protection to the extent of 4 per cent. The question of the abolition of the Excise entirely had to be dismissed from consideration in view of the demands upon the exchequer, as it was estimated to produce in 1917-18 £ 320,000. By means of the increase in the tariff on Cotton Duties the Finance Member estimated to produce an additional £ 1 million per annum. The proposal was received with immense satisfaction in India as a step towards the righting of what is almost everywhere regarded as a reverse economic wrong. It aroused very vehement protests in Lancashire where the cotton industry organised its political vote and brought great pressure to bear upon the Secretary of State to withdraw the measure. Mr. Austen Chamberlain, the then Secretary of State for India, stood firm and with the Government at his back refused to budge an inch from the position which he had taken up in supporting the Government of India in this matter. There were anxious moments in the House of Commons when the Labour Party joining with the Irish Nationalists and the Lancashire vote mobilised its forces against the Government especially as the attitude of Mr. Asquith and his following was obscure. In the end Mr. Asquith gave his support to the Government policy on the understanding that this, in common with all other fiscal issues, would be reconsidered at the end of the war. With this support, the Bill was carried through the House of Commons by a large majority. Whatever may be the influence of this slight protective duty in the future it cannot possibly affect the Lancashire industry at the present time. The dominant factor governing the imports of cotton is not its price but freight and prices have scared to such heights that a four per cent. protective duty cannot possibly influence the volume of Lancashire trade whilst these conditions prevail.

Banking.

Of the three Presidency Banks the Bank of Bengal which commenced business in the year 1806 is by far the oldest. It was followed by the Bank of Bombay in 1840 and by the Bank of Madras in 1843, but the former was wound up in the year 1867 and the present Bank dates from the year 1868.

To commence with and for some considerable time thereafter Government had a very large interest in all three Banks, holding as they did a large proportion of the share capital and having the right to nominate a number of the Directors. It was decided however in 1876 that this connection should cease and Government holding of shares was accordingly realised in that year and the right to be represented on the Directorates was given up at the same time. Government are still entitled, however, to audit the Banks' accounts at any time if they deem this necessary, to call for any information touching the affairs of the Banks and the production of any documents relative thereto, and may also require the publication of such statements of assets and liabilities at such intervals and in such form and manner as may be thought fit. The Banks' Agreements with Government are usually arranged for a period of ten years at a time and now-a-days provide for the most part for the carrying on at the head offices and branches of the ordinary banking business of Government in India and for the management and conduct in the three Presidency towns of the Government loans. The management of the Government Savings Bank was at one time entrusted to the Bank, but this was handed over to the Post Office in the year 1896.

Paper Currency.

The Banks had the right to issue currency notes until the year 1862; but in that year this privilege was withdrawn and to compensate the Banks for being deprived of this right, Government decided to deposit the whole of their balances at the Presidency towns with the Banks. This practice held good until the year 1876, when the Reserve Treasuries were formed; but since that year Government balances, which are all payable at call, have only been maintained at a figure sufficient to meet the demands of Government and sufficient also to compensate the Banks in part for the work of keeping the accounts. There are signs however that Government intend to adopt a more liberal policy in future in regard to the balances they maintain with the Presidency Banks." There is no definite undertaking on the part of Government to keep any balance with the Banks either at the head offices or branches; but there is a stipulation that in the event of the balance at the head office of each Bank falling below a certain stated figure, which varies in the case of each Bank, Government will pay interest on the deficit.

In order to assist Government in their attempts to encourage the use of currency notes throughout India the Banks have recently undertaken to issue and encash on behalf of Government universal Currency notes for the public freely at most of their Branches and in consideration of their having undertaken this work Government have, it is understood, agreed to maintain certain minimum balances, at such Branches so long as they are entrusted with this work.

Government Deposits.

The following statement shows the Government deposits with each Bank at various periods during the last 40 years or so :—

In Lakhs of rupees.

—	Bank of Bengal.	Bank of Bombay.	Bank of Madras.	Total.
30 June				
1881 ..	230	61	53	344
1886 ..	329	82	39	450
1891 ..	332	97	53	482
1896 ..	225	88	57	370
1901 ..	187	90	63	340
1906 ..	186	93	46	325
1911 ..	198	129	77	404
1912 ..	210	155	75	440
1913 ..	247	167	68	482
1914 ..	290	197	93	580
1915 ..	263	187	102	552
1916 ..	336	263	115	714
1917 ..	1338	716	209	2263
1918 ..	664	549	213	1426

General Banking Business.

This is regulated by the Presidency Banks Act, 1876, under which Act all three Banks are now working. The various descriptions of business which the Banks may transact are clearly laid down in Sec. 36 of the Act, and it is expressly provided in Sec. 37 that the Banks shall not transact any kind of banking business other than those sanctioned in Sec. 36. Briefly stated the main classes of business which the Banks may engage in are as follows :—

(1) Investing of money in any securities of the Government of India or of the United Kingdom of Great Britain and Ireland, the stock or debentures of, or shares in Railways bearing a Government guarantee in respect of interest and the debentures and securities of any Municipal body or Port Trust in India or of the Bombay Improvement Trust and the altering, converting and transposing of such investments.

(2) Advancing of money against any of the securities specified above or against bullion or other goods which or the

documents of title to which are deposited with or assigned to the Bank as security.

(3) Advancing of money against accepted bills of Exchange and promissory notes.

(4) Drawing, discounting, buying and selling of bills of exchange and other negotiable securities payable in India or Ceylon.

(5) Receiving deposits.

(6) Receiving securities for safe custody and realisation of interest, &c., from constituents of the Bank.

(7) Buying and selling of gold and silver, whether coined or uncoined.

(8) Transacting pecuniary agency business on commission.

The principal restrictions placed on the business of the Banks are as follows:—

(1) The drawing, discounting, buying and selling of bills of exchange and other negotiable securities is *confined* to bills and securities payable in India and Ceylon.

(2) Borrowing of money is only permitted in India.

(3) Loans or advances upon mortgage or in any other manner upon the security of any immovable property or the documents of title relating thereto is expressly prohibited.

(4) The amount which may be advanced to any individual or partnership by way of discount or on personal security is limited to an amount prescribed in the Bye-Laws of the Banks, such Bye-Laws having previously been approved by Government.

(5) Loans or advances cannot be granted for a longer period than six months at a time.

(6) Discounts cannot be made or advances on personal security be given, unless such discounts or advances carry with them the several responsibilities of at least two persons or firms unconnected with each other in general partnership.

Various representations have been made to Government by the Banks to have certain of these restrictions withdrawn, particularly those referred to under Nos. 1 and 2, which latter effectually prevent the Banks from doing anything in the nature of exchange business and from having access to the London money market for borrowing purposes. The Government of India were prepared to meet the Banks wishes in the above connection to a great extent in the year 1903; but the Secretary of State did not approve of the Government proposals, and they were finally negatived in 1906.

Government Deposits.

The proportions which Government deposits have borne from time to time to the total Capita Reserve and deposit of the three Banks are shown below :—

In Lakhs of Rupees.

—	1 Capital.	2 Reserve.	3 Government deposits.	4 Other deposits.	Proportion of Government deposits to 1, 2, 3 & 4.
31st December.					
1891	350	97	297	1412	13·7 per cent.
1896	350	158	299	1292	14·2 ,,
1901	360	213	340	1463	14·3 ,,
1906	360	279	307	2745	8·3 ,,
1907	360	294	335	2811	8·8 ,,
1908	360	309	325	2861	8·4 ,,
1909	360	318	319	3265	7·4 ,,
1910	360	331	423	3234	9·7 ,,
1911	360	340	438	3419	9·6 ,,
1912	375	361	426	3578	9·0 ,,
1913	375	370	587	3644	11·8 ,,
1914	375	386	561	4002	10·5 ,,
1915	375	369	487	3860	9·5 ,,
1916	375	358	520	4470	9·0 ,,
1917	375	363	771	6771	9·3 ,,

The Banks have also the management of the debt of a number of the Municipalities, Port Trusts and Improvement Trusts throughout India.

Government policy in regard to the disposal of their surplus treasury balances in India has been strongly criticised at various times during the last thirty years or so, and it has been argued that the high rates of interest which are so common a feature in India when the crops come to be marketed are to a very large extent due to Government action in withdrawing money from the market when it is most needed and locking it up in the Reserve Treasuries. This question was considered at some length by the Royal Commission on Indian Finance and Currency q. v. which arrived at the conclusion that the present methods of dealing with the balances were open to criticism. The Commission further stated that the most obvious remedy would be to close the Reserve Treasuries and place the whole of the Government balances in the Presidency towns with the Ptesidency Banks; but their final recommendarion in this connection was that Government should make loans from their balances to the Presidency Banks—such loans to be within the absolute discretion of Government and to be granted only on good security and for short periods. It is not known how far the Government of India are prepared to accept the Commission's recommendation in this respect.

The question of the establishment of a State Bank was considered at some length by the Commission and a considerable mass of evidence was taken on this point. The opinions offered were however very conflicting, and although a draft scheme for such a Bank was drawn up by two of the Members of the Commission, the Commission as a whole finally came to the conclusion that they were not in a position to make recommendations one way or the other on the question of a State Bank. The whole question will no doubt receive full consideration after the war.

Recent Progress.

The following statements shew the progress made by the three Banks within recent years :—

In Lakhs of Rupees.

BANK OF BENGAL.

—	Capital.	Reserve.	Govt. deposits.	Other deposits.	Cash.	Investments.	Dividend for year.
31st December.							
1895	200	68	184	677	422	132	10 per cent.
1900	200	103	155	582	243	136	11 ,,
1905	200	140	167	1204	396	181	12 ,,
1906	200	150	160	1505	528	149	12 ,,
1907	200	157	187	1573	460	279	12 ,,
1908	200	165	178	1575	507	349	13 ,,
1909	200	170	168	1760	615	411	14 ,,
1910	200	175	198	1609	514	368	14 ,,
1911	200	180	270	1677	729	321	14 ,,
1912	200	185	234	1711	665	310	14 ,,
1913	200	191	301	1824	840	319	14 ,,
1914	200	200	287	2160	1169	621	16 ,,
1915	200	*204	265	1978	785	793	16 ,,
1916	200	*213	274	2143	772	768	16 ,,
1917	200	†221	448	2934	1482	773	17 ,,

* Includes Rs. 63 lakhs as a reserve for depreciation of investments.

† ,, 67 ,, ,, ,, ,,

BANK OF BOMBAY.

1895	100	51	76	358	228	105	11 per cent.
1900	100	70	87	432	129	89	11 ,,
1905	100	87	92	676	259	158	12 ,,
1906	100	92	101	832	354	177	12 ,,
1907	100	96	112	821	324	164	13 ,,
1908	100	101	94	832	377	149	13 ,,
1909	100	103	120	1035	415	163	13 ,,
1910	100	105	152	1053	436	149	14 ,,
1911	100	106	107	1104	463	208	14 ,,
1912	100	106	117	1124	315	210	14 ,,
1913	100	106	200	1015	477	232	14 ,,
1914	100	110	183	1081	646	202	15 ,,
1915	100	100	136	1079	423	276	15 ,,
1916	100	90	142	1367	667	312	15 ,,
1917	100	92	235	2817	1398	744	17½ ,,

BANK OF MADRAS.

	Capital.	Reserve.	Govt. deposits.	Other deposits.	Cash.	Investments.	Dividend for year.
1895	50	16	45	278	144	45	10 per cent.
1900	60	22	35	260	82	67	8 „
1905	60	30	41	344	140	71	10 „
1906	60	32	54	355	151	81	10 „
1907	60	36	35	416	162	84	10 „
1908	60	40	52	447	153	84	11 „
1909	60	44	49	500	141	79	12 „
1910	60	48	72	567	184	85	12 „
1911	60	52	59	625	165	104	12 „
1912	75	70	75	743	196	113	12 „
1913	75	73	86	805	219	117	12 „
1914	75	76	91	761	267	134	12 „
1915	75	65	86	803	256	184	12 „
1916	75	55	104	960	286	161	12 „
1917	75	50	87	1020	496	94	12 „

Note.—(The Banks have power under Sec. 36 (*l*) to draw Bills of Exchange payable out of India under certain stated circumstances, but this permission is of comparatively little importance.)

Branches.

BANK OF BENGAL.

Calcutta—
Harrison Road, Clive Street & Park Street.

Agra, Akyab, Allahabad, Benares, Cawnpore, Chittagong, Dacca, Delhi, Hyderabad Deccan, Jalpaiguri, Lahore, Lucknow, Moulmein, Nagpore, Naraingunge, Patna, Rangoon, Secunderabad, Simla.

Pay Offices.

Chandpore, Serajgunge and Bombay (*Agency*).

BANK OF BOMBAY.

Bombay—
Byculla, Mandvi and Sandhurst Road,
Ahmedabad, Ahmedabad City (Sub Branch), Akola, Amraoti, Broach, Hyderabad (Sind), Indore, Jalgaon, Karachi, Poona, Rajkot, Sholapur, Sukkur and Surat.

BANK OF MADRAS.

Alleppy, Bangalore, Bellary, Bimlipatam, Calicut, Coconada, Cochin, Coimbatore, Colombo, Guntur, Madura, Mangalore, Masulipatam, Negapatam, Ootacamund, Salem, Tellicherry Trichinopoly, Trivandrum and Tuticorin.

Out Stations.

Bezwada Erode, Narsapur, Rajahmundry and Vizianagram.

THE EXCHANGE BANKS.

The Banks carrying on Exchange business in India are merely branch agencies of Banks having their head offices in London, on the Continent, or in the Far East and the United States. Originally their business was confined almost exclusively to the financing of the external trade of India; but in recent years most of them, while continuing to finance this part of India's trade, have also taken an active part in the financing of the internal portion also at the places where their branches are situated.

At one time the Banks carried on their operations in India almost entirely with money borrowed elsewhere, principally in London—the home offices of the Banks attracting deposits for use in India by offering rates of interest much higher than the English Banks were able to quote. Within recent years however it has been discovered that it is possible to attract deposits in India on quite as favourable terms as can be done in London and a very large proportion of the financing done by the Exchange Banks is now carried through by means of money actually borrowed in India. No information is available as to how far *each* Bank has secured deposits in India but the following statement published by the Director-General of Statistics in India shows how rapidly such deposits have grown in the aggregate within recent years.

TOTAL DEPOSITS OF ALL EXCHANGE BANKS SECURED IN INDIA.

In Lakhs of Rupees.

1895	1030
1900	1050
1901	1183
1902	1370
1903	1614
1904	1632
1905	1704
1906	1808
1907	1917
1908	1951
1909	2027
1910	2479
1911	2816
1912	2953
1913	3103
1914	3014
1915	3354
1916	3803

Exchange Banks' Investments.

Turning now to the question of the investment of the Banks' resources, so far as it concerns India, this to a great extent consists of the purchase of bills drawn against imports and exports to and from India.

The financing of the import trade originated and is carried through however for the most

part by Branches outside of India, the Indian Branches' share in the business consisting principally in collecting the amount of the bills at maturity and in furnishing their other branches with information as to the means and standing of the drawees of the bills, and it is as regards the export business that the Indian Branches are more immediately concerned. The Exchange Banks have practically a monopoly of the export finance in India and in view of the dimensions of the trade which has to be dealt with the Banks would under ordinary circumstances require to utilise a very large proportion of their resources in carrying through the business. They are able however by a system of rediscount in London to limit the employment of their own resources to a comparatively small figure in relation to the business they actually put through. No definite information can be secured as to the extent to which rediscounting in London is carried on but the following figures appearing in the balance sheets dated 31st December 1917 of the undernoted Banks will give some idea of this.

LIABILITY ON BILLS OF EXCHANGE RE-DISCOUNTED AND STILL CURRENT.

	£
Chartered Bank of India	6,150,000
Eastern Bank, Ld.	748,000
Hongkong and Shanghai Banking Corporation.	8,699,000
Mercantile Bank of India, Ld. ..	3,415,000
National Bank of India, Ld... ..	2,133,000
	21,145,000

The above figures do not of course relate to re-discounts of Indian bills alone, as the Banks operate in other parts of the world also, but it may safely be inferred that bills drawn in India form a very large proportion of the whole.

The bills against exports are largely drawn at three months' sight and may either be "clean" or be accompanied by the documents relating to the goods in respect of which they are drawn. Most of them are drawn on well known firms at home or against credits opened by Banks or financial houses in England and bearing as they do an Exchange Bank endorsement they are readily taken up by the discount houses and Banks in London. Any bills purchased in India are sent home by the first possible Mail so that presuming they are rediscounted as soon as they reach London the Exchange Banks are able to secure the return of their money in about 16 or 17 days instead of having to wait for three months which would be the case if they were unable to rediscount. It must not be assumed however that all bills are rediscounted as soon as they reach London as at times it suits the Banks to hold up the bills in anticipation of a fall in the London discount rate while on occasions also the Banks prefer to hold the bills on their own account as an investment until maturity.

The Banks place themselves in funds in India for the purpose of purchasing export bills in a variety of ways of which the following are the principal:—

(1) Proceeds of import bills as they mature.
(2) Sale of drafts and telegraphic transfers payable in London and elsewhere out of India.
(3) Purchase of Council Bills and Telegraphic Transfers payable in India from the Secretary of State.
(4) Imports of bar gold and silver bullion.
(5) Imports of sovereigns from London, Egypt or Australia.

The remaining business transacted by the Banks in India is of the usual nature and need not be given in detail.

The following is a statement of the position of the various Exchange Banks carrying on business in India as at 31st December 1917.

In Thousands of £.

——	Capital.	Reserve.	Deposits.	Cash and Investment.
Chartered Bank of India	1200	2000	28042	12020
Comptoir National D' Escompte de Paris.	8000	1715	74720	15505
Eastern Bank, Ld.	600	70	5049	2275
Hongkong & Shanghai Bank	1500	3450	31402	10253
International Banking Corpn.	650	992	7306	3204
Mercantile Bank of India	562	650	9812	3295
National Bank of India	1000	1250	24685	8851
Russo Asiatic Bank (1915)	4745	2500	48200	11260
Yokohama Specie Bank	4200	2492	52700	19901
Sumitomo Bank	1875	360	18762	5540
Bank of Taiwan	2250	603	33430	7715

JOINT STOCK BANKS.

Previous to 1906 there were few Banks of this description operating in India, and such as were then in existence were of comparatively small importance and had their business confined to a very restricted area. The rapid development of this class of Bank, which has been so marked a feature in Banking within recent years, really had its origin in Bombay and set in with the establishment of the Bank of India and the Indian Specie Bank in 1906. After that time there was a perfect stream of new flotations, and although many of the new Companies confined themselves to legitimate banking business, on the other hand a very large number engaged in other businesses in addition and can hardly be properly classed as Banks.

These Banks made very great strides during the first few years of their existence, but it was generally suspected in well informed circles that the business of many of the Banks was of a very speculative and unsafe character and it was a matter of no great surprise to many people when it became known that some of the Banks were in difficulties.

The first important failure to take place was that of the People's Bank of India and the loss of confidence caused by the failure of that Bank resulted in a very large number of other failures, the principal being that of the Indian Specie Bank.

The public have for the time being lost much of their confidence in this class of Bank and deposits to a very large extent have been withdrawn and it is feared that a large portion of the money has gone back into hoards. This is very unfortunate as many of the Banks, particularly the older established concerns, have always been recognised as being conducted on safe and prudent lines.

The following shows the position of the better known existing Banks as it appears in the atest available Balance Sheets :—

In Lakhs of Rupees.

——	Capital.	Reserve.	Deposits.	Cash and Investments.
Allahabad Bank, Ld.	30	50	589	238
Alliance Bank of Simla, Ld.	86	50	1229	523
Bank of Baroda, Ld.	10	7	178	52
Bank of India, Ld.	50	12	445	207
Bank of Mysore, Ld.	10	3	74	27
Central Bank of India, Ld.	25	5	494	262
Indian Bank, Ld.	10	2	29	10
Karachi Bank, Ld.	2	..	7	1
National Financing and Commission Corporation, Ld.	10	1	37	20
Oudh Commercial Bank, Ld.	5	3	12	3
Punjab National Bank, Ld.	16	11	142	72

The principal Banks which have gone into liquidation during the last three or four years are given below along with a Statement of their Capital Reserve and deposits as at the date of the latest available Balance Sheets :—

In Lakhs of Rupees.

——	Capital.	Reserve.	Deposits.
Bank of Upper India (1912)	10	9	191
Bombay Banking Co.	1	..	15
Credit Bank of India, Ld.	10	..	51
Deccan Bank, Ld.	1	..	11
Indian Specie Bank, Ld.	75	15	270
Kathiawad and Ahmedabad Banking Corporation ..	7	..	23
Lahore Bank, Ld. (1912)..	1	..	28
People's Bank of India, Ld.	12	2	127
Punjab Co-operative Bank, Ld. (1912)	7	2	60
The Pioneer Bank	3–84	..	1·96
Standard Bank, Ld.	10	..	4

Growth of Joint Stock Banks.

The following figures appearing in the Report of the Director-General of Statistics shews the growth of the Capital, Reserve and Deposits of the principal Joint Stock Banks registered in India :—

In Lakhs of rupees.

	Capital.	*Reserve.*	*Deposits.*
1870 ..	9	1	13
1875 ..	14	2	27
1880 ..	18	3	63
1885 ..	18	5	94
1890 ..	33	17	270
1895 ..	63	31	566
1900 ..	82	45	807
1905 ..	84	77	1198
1906 ..	133	56	1155
1907 ..	229	63	1400
1908 ..	239	69	1626
1909 ..	266	87	2049
1910 ..	275	100	2565
1911 ..	285	126	2529
1912 ..	291	134	2725
1913 ..	231	132	2259
1914 ..	251	141	1710
1915 ..	281	156	1787
1916 ..	287	173	2471

NATIVE PRIVATE BANKERS AND SHROFFS.

Native private Bankers and Shroffs flourished in India long before Joint Stock Banks were ever thought of, and it seems likely that they will continue to thrive for some very considerable time to come. The use of the word "Shroff" is usually associated with a person who charges usurious rates of interest to impecunious people, but this is hardly fair to the people known as "shroffs" in banking circles, as there is no doubt that the latter are of very real service to the business community and of very great assistance to Banks in India. Under present conditions the Banks in India can never hope to be able to get into sufficiently close touch with the affairs of the vast trading community in India to enable them to grant accommodation to more than a few of these traders direct, and it is in his capacity as middleman that the shroff proves of such great service. In this capacity also he brings a very considerable volume of business within the scope of the Presidency Banks Act, and enables the Presidency Banks to give accommodation which, without his assistance, the Banks would not be permitted to give. The shroff's position as an intermediary between the trading community and the Banks usually arises in something after the following manner. A Shopkeeper in the bazaar, with limited means of his own, finds that, after using all his own money, he still requires say Rs. 25,000 to stock his shop suitably. He thereupon approaches the shroff, and the latter after very careful inquiries as to the shopkeeper's position grants the accommodation, if he is satisfied that the business is safe. The business, as a rule, is arranged through a hoondee broker, and in the case referred to the latter may probably approach about ten shroffs and secure accommodation from them to the extent of Rs. 2,500 each. A hoondee usually drawn at a currency of about 2 months is almost invariably taken by the shroffs in respect of such advances.

A stage is reached however when the demands on the shroffs are greater than they are able to meet out of their own money, and it is at this point that the assistance of the Banks is called into requisition. The shroffs do this by taking a number of the bills they already hold to the Banks for discount under their endorsement, and the Banks accept such bills freely to an extent determined in each case by the standing of the shroff and the strength of the drawers. The extent to which any one shroff may grant accommodation in the bazaar is therefore dependent on two factors, *viz.*, (1) the limit which he himself may think it advisable to place on his transactions, and (2) the extent to which the Banks are prepared to discount bills bearing his endorsement. The shroffs keep in very close touch with all the traders to whom they grant accommodation, and past experience has shewn that the class of business above referred to is one of the safest the Banks can engage in.

The rates charged by the shroffs are usually based on the rates at which they in turn can discount the bills with the Banks and necessarily vary according to the standing of the borrower and with the season of the year. Generally speaking, however, a charge of two annas per cent. per mensem above the Bank's rate of discount, or 1½ % is a fair average rate charged in Bombay to a first class borrower. Rates in Calcutta and Madras are on a slightly higher scale due in a great measure to the fact that the competition among the shroffs for business is not so keen in these places as it is in Bombay.

The shroffs who engage in the class of business above described are principally Marwaries and Multanis having their head Offices for the most part in Bikanir and Shikarpur, respectively, the business elsewhere than at the Head Offices being carried on by "Moonims" who have very wide powers.

It is not known to what extent native bankers and shroffs receive deposits and engage in exchange business throughout India, but there is no doubt that this is done to a very considerable extent.

THE BANK RATE.

Each Presidency Bank fixes its own Bank rate, and the current rate of each Bank determines to a great extent the rates for all important classes of business within the Bank's sphere of influence. The rates in the three Presidencies are not always uniform, but it seldom happens that a difference of more than 1% exists, more particularly as regards Bombay and Bengal, which seem to be in closer touch with each other than appears to be the case with Madras.

The rate fixed represents the rate charged by the Banks on demand loans against Government securities only and advances on other securities or discounts are granted as a rule at a slightly higher rate. Ordinarily such advances or discounts are granted at from one-half to one per cent. over the official rate; but this does not always apply and in the monsoon months, when the Bank rate is sometimes nominal, it often happens that such accommodation is granted at the official rate or even less.

The following statement shews the average Bank rate of each Bank since 1881:—

Year.	Bank of Bombay.			Bank of Bengal.			Bank of Madras.		
	1st Half-year.	2nd Half-year.	Yearly average.	1st Half-year.	2nd Half-year.	Yearly average.	1st Half-year.	2nd Half-year.	Yearly average.
1884 ..	9·03	4·17	6·60	8·813	3·946	6·379	8·42	4·13	6·27
1885 ..	5·90	4·00	4·95	6·757	4·005	5·381	5·71	3·23	4·47
1886 ..	6·35	6·50	6·42	5·923	6·152	6·037	5·48	5·64	5·56
1887 ..	7·78	3·73	5·75	7·475	3·804	5·639	7·92	3·90	5·91
1888 ..	5·90	5·51	5·70	5·736	5·185	5·460	5·78	5·44	5·61
1889 ..	9·46	4·00	6·73	9·309	4·674	6·991	9·62	4·14	6·88
1890 ..	9·21	3·28	6·24	8·265	3·315	5·790	8·14	3·32	5·73
1891 ..	3·88	2·23	3·05	3·502	2·622	3·062	3·60	2·25	2·92
1892 ..	3·97	3·04	3·50	3·884	3·114	3·499	4·03	3·07	3·55
1893 ..	5·97	3·84	4·90	5·685	4·076	4·880	6·19	4·36	5·27
1894 ..	7·55	3·46	5·50	7·425	3·364	5·394	6·72	3·31	5·01
1895 ..	4·30	3·60	3·95	5·066	3·592	4·329	5·02	3·50	4·26
1896 ..	5·85	5·10	5·47	5·774	5·608	5·691	6·00	5·28	5·64
1897 ..	10·11	5·64	7·87	9·884	5·967	7·925	9·97	6·00	7·98
1898 ..	12·03	4·55	8·29	11·016	5·114	8·065	11·09	4·51	7·80
1899 ..	6·34	5·42	5·88	6·337	5·494	5·915	6·27	5·83	6·05
1900 ..	6· 9	3·79	5·34	6·414	4·272	5·343	7·24	4·50	5·87
1901 ..	7·07	3·83	5·45	6·895	4·070	5·482	7·57	4·09	5·83
1902 ..	6·25	3·43	4·84	6·176	3·549	4·862	7·	4·02	5·51
1903 ..	6· 7	3·48	5·09	6·265	3·494	4·879	7·13	4·27	5·70
1904 ..	5·15	3·82	4·48	5·560	4·190	4·875	6·42	4·07	5·24
1905 ..	5·77	4·42	5·09	5·558	4·630	5·094	6·04	4·19	5·11
1906 ..	7·24	5·28	6·26	6·950	5·885	6·417	7·15	5·04	6·09
1907 ..	7·81	4·11	5·96	7·635	4·576	6·105	8·24	4·54	6·39
1908 ..	7·84	4·02	5·93	7·417	4·244	5·830	8·38	4·38	6·38
1909 ..	6·47	3·82	5·14	6·580	3·907	5·243	7·55	4·41	5·98
1910 ..	6·19	4·14	5·16	6·143	4·510	5·326	7·17	4·65	5·91
1911 ..	6·55	3·52	5·03	6·657	4·358	5·507	7·59	4·35	5·97
1912 ..	6·01	4·10	5·05	6·242	4·592	5·417	7·51	4·59	6·05
1913 ..	7·23	4·62	5·92	6·569	5·331	5·950	7·76	5·54	6·65
1914 ..	5·52	5·28	5·40	5·939	4·961	5·450	6·63	5·16	5·89
1915 ..	5·84	5·30	5·57	5·839	5·543	5·691	5·87	5·54	5·70
1916 ..	7·18	5·65	6·41	7·252	6·321	6·786	7·71	6·48	7·09
1917 ..	6·70	5·42	6·06	6·690	5·364	6·027	8·	6·64	7·32
1918 ..	5·79	....	....	5·773	....	....	6·92	....	....

Bank of Bombay.		Bank of Bengal.		Bank of Madras.	
Date.	Rate.	Date.	Rate.	Date.	Rate.
1904	Per cent.	1905	Per cent.	1902	Per cent.
February .. 11	7	February .. 23	7	January .. 14	6
„ .. 25	6	March .. 9	8	„ .. 20	7
March .. 10	5	„ .. 30	7	February .. 6	8
May .. 19	4	April .. 6	6	May .. 1	7
June .. 16	3	„ .. 14	5	„ .. 29	6
October .. 13	4	„ .. 27	4	June .. 12	5
„ .. 20	5	July .. 20	3	„ .. 30	4
1905		August .. 17	4	December .. 23	5
February .. 2	6	September .. 29	5	1903	
„ .. 16	7	November .. 30	6	January .. 12	6
March .. 9	8	December .. 14	7	February .. 3	7
„ .. 30	7	1906		„ .. 10	8
April .. 6	6	January .. 4	8	April .. 20	7
„ .. 14	5	February .. 1	9	July .. 2	6
July .. 6	4	March .. 15	8	„ .. 13	5
„ .. 27	3	„ .. 22	7	„ .. 23	4
August .. 10	4	April .. 5	6	December .. 21	5
November .. 23	5	„ .. 12	5	1904	
„ .. 30	6	May .. 3	6	January .. 7	6
December .. 14	7	„ .. 17	7	„ .. 21	7
1906		„ .. 24	6	May .. 16	6
January .. 4	8	June .. 7	5	„ .. 30	5
February .. 1	9	„ .. 28	4	July .. 5	4
March .. 15	8	July .. 19	3	December .. 22	5
„ .. 22	7	August .. 9	4	1905	
„ .. 29	6	„ .. 23	5	January .. 23	6
April .. 26	7	September .. 13	6	February .. 27	7
May .. 24	6	„ .. 20	7	March .. 13	8
June .. 21	5	October .. 11	6	April .. 3	7
July .. 12	4	November .. 15	7	„ .. 14	6
„ .. 9	3	„ .. 29	8	May .. 8	5
August .. 9	4	December .. 6	9	„ .. 29	6
September .. 12	5	1907		June .. 15	5
November .. 15	6	April .. 18	8	July .. 10	4
„ .. 22	7	„ .. 25	7	December .. 18	6
„ .. 29	8	May .. 2	6	1906	
December .. 13	9	„ .. 16	5	January .. 8	7
1907		July .. 4	4	„ .. 16	8
March .. 7	8	„ .. 25	3	April .. 4	7
May .. 2	7	September .. 12	4	May .. 28	6
„ .. 9	6	„ .. 26	5	June .. 21	5
June .. 6	7	November .. 7	6	July .. 12	4
„ .. 20	6	1908		September .. 17	5
„ .. 27	5	January .. 4	7	November .. 29	6
July .. 4	4	„ .. 9	8		
August .. 1	3				
September .. 26	4				
November .. 7	5				
December .. 12	6				

Bank of Bombay.			Bank of Bengal.			Bank of Madras.		
Date.		Rate.	Date.		Rate.	Date.		Rate.
1908		Per cent.	1908		Per cent.	1906		Per cent.
January ..	3	7	January ..	16	9	December ..	6	7
,, ..	9	8				,, ..	10	8
February ..	6	9	March ..	5	8			
			,, ..	26	7	1907		
March ..	19	8	May ..	21	6	January ..	16	9
,, ..	26	7				April ..	29	8
April ..	16	8	June ..	25	5	May ..	6	7
			July ..	2	4			
May ..	28	7	,, ..	16	3	June ..	24	6
June ..	25	6				July ..	1	5
			September ..	3	4			
July ..	2	5	November ..	5	5	July ..	8	4
,, ..	16	4	,, ..	26	6	November ..	4	5
,, ..	23	3						
October ..	22	4	1909			December ..	5	6
			January ..	14	7	,, ..	23	7
November ..	5	5	,, ..	28	8			
December ..	10	6	March ..	18	7	1908		
						January ..	9	8
1909			April ..	29	6	February ..	10	9
January ..	14	7	May ..	27	5			
May ..	13	6	June ..	17	4	May ..	18	8
						June ..	15	7
June ..	3	5	July ..	1	3	,, ..	25	6
,, ..	24	4	September ..	30	4			
July ..	15	3				July ..	7	5
			November ..	13	5	,, ..	14	4
November ..	4	4	December ..	9	6	November ..	30	5
,, ..	18	5				December ..	10	6
,, ..	25	6	1910					
			March ..	3	7	1909		
1910			May ..	12	6	January ..	12	7
March ..	3	7				,, ..	28	8
May ..	12	6	June ..	2	5			
			,, ..	16	4	June ..	1	7
June ..	2	5	,, ..	30	3	,, ..	17	6
,, ..	23	4				,, ..	28	5
			September ..	22	4	July ..	19	4
July ..	7	3	October ..	6	5			
October ..	6	4				November ..	16	5
			November ..	3	6	December ..	20	6
November ..	3	5	December ..	1	7			
,, ..	17	6				1910		
December ..	15	7	1911			January ..	4	7
			February ..	23	8	March ..	7	8
1911			March ..	30	7	May ..	13	7
May ..	18	6						
June ..	1	5	May ..	11	6	June ..	7	6
,, ..	21	4	June ..	1	5	,, ..	20	5
July ..	13	3	,, ..	15	4	July ..	4	4
October ..	19	4	August ..	3	3	November ..	8	5
December ..	21	5	,, ..	31	4	,, ..	18	6
			September ..	28	5			
1912						December ..	20	7
January ..	11	6	1912			,, ..	22	8
,, ..	18	7	January ..	11	6			
			,, ..	18	7	1911		
February ..	1	8	,, ..	26	8	May ..	23	7
,, ..	22	7				June ..	7	6
			March ..	7	7			
March ..	20	6	,, ..	21	6	,, ..	19	5
May ..	9	5	May ..	23	5	July ..	7	4

Bank of Bombay.		Bank of Bengal.		Bank of Madras.	
Date.	Rate.	Date.	Rate.	Date.	Rate.
	Per cent.		Per cent.		Per cent.
1912		1912		1911	
June .. 13	4	June .. 20	4	November .. 14	5
July .. 11	3	July .. 11	3	December .. 21	6
October .. 3	4	September .. 13	4		
November .. 14	5	October .. 3	5		
,, .. 28	6	November .. 14	6	1912	
December .. 12	7	,, .. 28	7	January .. 9	7
,, .. 27	8			,, .. 29	8
		1913		May .. 29	7
1913				June .. 17	6
		January .. 9	8	,, .. 24	5
April .. 3	7	February .. 13	7	July .. 8	4
May .. 29	6	April .. 17	6	November .. 12	5
June .. 12	5	June .. 5	5	December .. 2	6
July .. 3	4	,, .. 19	4	,, .. 9	7
,, .. 17	3			,, .. 30	8
August .. 7	4	July .. 3	3		
September .. 10	5	August .. 7	4		
October .. 10	6	,, .. 28	5	1913	
,, .. 31	5	September .. 18	6		
		November .. 13	7	June .. 4	7
1914				,, .. 16	6
		1914		July .. 8	5
January .. 15	6			October .. 1	6
May .. 21	5	March .. 19	6		
June .. 4	4	May .. 1	5		
,, .. 25	3			1914	
August .. 6	4	June .. 4	4		
,, .. 13	5	July .. 9	3	January .. 2	7
,, .. 20	6			May .. 25	6
		August .. 6	5	June .. 8	5
		November .. 5	6	,, .. 23	4
1915				August .. 21	5
		1915		October .. 12	6
June .. 2	5				
November .. 4	6	June .. 2	5		
		September .. 23	6	1915	
1916					
				June .. 7	5
January .. 6	7	1916		October .. 4	6
,, .. 13	8			December .. 20	7
April .. 13	7	January .. 1	7		
May .. 25	6	,, .. 20	8		
June .. 15	5	April .. 14	7	1916	
July .. 13	4	June .. 1	6		
August .. 17	5	,, .. 22	5	January .. 17	8
October .. 5	6	September .. 14	6	June .. 5	7
November .. 23	7	October .. 12	7	,, .. 19	6
,, .. 30	8	November .. 9	8	October .. 30	7
				December .. 4	8
1917		1917			
				1917	
February .. 22	7	February .. 22	7		
March .. 15	6	March .. 15	6	August .. 20	7
August .. 23	5	September .. 6	5	September .. 3	6
December .. 6	6				
		1918		1918	
1918					
		January .. 3	6	January .. 15	7
May .. 23	5	May .. 23	5	August .. 5	6
November .. 7	6	November .. 7	6		

BANKERS' CLEARING HOUSES.

The principal Clearing Houses in India are ıose of Calcutta, Bombay, Madras, and Ka-ıchi, and of these the first two are by far the ıost important. The members at these places ɔnsist of the Presidency Banks, most of the xchange Banks and English Banking Agency rms, and a few of the better known of the cal Joint Stock Banks. No Bank is entitled ı claim to be a member as of right and any ɔplication for admission to a Clearing must ɛ proposed and seconded by two members ıd be subject thereafter to ballot by the ex-ting members.

The duties of settling Bank are undertaken ɣ the Presidency Bank at each of the places entioned and a representative of each member tends at the office of that Bank on each busi-ɛs day at the time fixed to deliver all cheques ı may have negotiated on other members and to receive in exchange all cheques drawn on him negotiated by the latter. After all the cheques have been received and delivered the representative of each Bank advises the settling Bank of the difference between his total receipts and deliveries and the settling Bank thereafter strikes a final balance to satisfy itself that the totals of the debtor balances agrees with the total of the creditor balances. The debtor Banks thereafter arrange to pay the amounts due by them to the settling Bank during the course of the day and the latter in turn arranges to pay on receipt of those amounts the balances due to the creditor Banks. In practice however all the members keep Bank accounts with the settling Bank so that the final balances are settled by cheques and book entries thus doing away with the necessity for cash in any form.

The figures for the Clearing Houses in India above referred to are given below :—

Total amount of Cheques Cleared Annually.

In lakhs of Rupees.

——	Calcutta.	Bombay.	Madras.	Karachi.	Total.
01	Not available	6,511	1,338	178	8,027
02	....	7,013	1,295	268	8,576
03	....	8,762	1,464	340	10,566
04	....	9,492	1,536	365	11,393
05	....	10,927	1,560	324	12,811
06	....	10,912	1,583	400	12,895
07	22,444	12,645	1,548	530	37,167
08	21,281	12,585	1,754	643	36,263
09	19,776	14,375	1,948	702	36,801
10	22,238	13,652	2,117	755	41,762
11	25,763	17,605	2,083	762	46,213
12	28,831	20,831	1,152	1,159	52,835
13	33,133	21,890	2,340	1,219	58,582
14	28,031	17,696	2,127	1,315	49,169
15	32,266	16,462	1,887	1,352	51,967
16	48,017	24,051	2,495	1,503	76,066
17	47,193	33,655	2,339	2,028	85,215

Government of India Rupee Loans.

The following are the Loans in the hands of the public still extant, all the others having been extinguished either by conversion or by discharge :—

(1)	Three & a half per cent. loan of	1842–43
(2)	Ditto	1854–55
(3)	Ditto	1865
(4)	Ditto	1879
(5)	Three per cent. loan of	1896–97
(6)	Three & a half per cent. loan of	1900–01
(7)	4 per cent. Terminable loan of	1915–16
(8)	4 per cent. Conversion loan of	1916–17
(9)	5 per cent. War Loan of	1917
(10)	5½ per cent. War Bonds of	1917
(11)	Ditto	1918

The first four of these loans were made repayable at the option of Government on or after 31st July 1904 on three months' notice being given so that the position now as regards these loans is that Government are at liberty to discharge them at any time on giving three months' notice. In view however of the necessity of fresh borrowings by Government this power is not likely to be exercised for some considerable time to come.

The 3½ per cent. Loan of 1900–01 is repayable, also at the option of Government, on or after 31st December 1920 on three months' notice being given and all loans issued since the year 1900 have been included in and form part of the 1900–01 loan.

In 1896 Government resolved in view of the easy condition of the money market to try the experiment of borrowing at 3 per cent. and the loan of Rs. 4 crores raised in that year was accordingly issued bearing that rate of interest. The opportunity was also taken to advertise for discharge the two 3½ per cent. loans of 1853-54 and 1893–94 but proprietors of these loans were given the option of transferring their holdings to the new 3 per cent. loan. The Rs. 4 crores loan was successfully floated and appeared to be a great success but it was soon seen that the public had no use for a 3 per cent. security and Government have never repeated the attempt to borrow at 3 per cent. The successful tenderers for the loan of 1896–97 experienced great difficulty in disposing of any part of their holdings and as through course of time the notes became practically unmarketable it was generally felt that Government must do something to improve the market for the notes. Various proposals were submitted to Government with this end in view but the latter delayed taking any action in the matter until the year 1908. Such action took the form of giving holders the option of converting their 3 per cent. notes into 3½ per cent. notes of the 1900–01 loan on the following terms :—

(1) If the face value of the 3 per cent. notes tendered for conversion is an exact multiple of Rs. 700 the tenderer will receive in exchange 3½ per cent. notes for 6-7ths of such face value.

(2) If the face value of the 3 per cent. not tendered for conversion does not for an exact multiple of Rs. 700 the tender has the option of receiving—

(*a*) 3½ per cent. notes equivalent to t nearest lower multiple of Rs. 700 c culated as in Clause 1 together wi the difference in 3 per cent. notes,

(*b*) 3½ per cent. notes of the nearest high equivalent face value in hundre calculated as in Clause 1 on payme in cash of the difference betwe (i) 6-7ths of the face value of t 3 per cent. notes tendered and (i the face value of the 3½ per cent. not received in exchange.

The above offer is still in force but Gover ment have reserved the right to withdraw at any time on giving 6 months' notice. T balance of the 3 per cent. loan stood Rs. 10,95 lacs on 31st March 1897, at Rs. 11,(lacs on 30th September 1908 at Rs. 8,42 la on 31st March 1913 and at Rs. 7,26 lacs on 31 March 1917. The work connected with the pa ment of interest, &c., on Government loans entrusted to the Presidency Banks in the Presidency towns, to the District Treasuri elsewhere in India, and to the Bank of Englan in London.

The 4 per cent. Terminable Loan of 1915-191 was issued at par in August 1915 and the Loa if not previously redeemed will be repaid a par on 30th November 1923, Government how ever reserves the right to redeem the loan o any part of it at any time on or after the 30t November 1920 on giving three months' notic A new departure was made when issuing thi loan—the public were permitted to mak applications through the Post Office for sum not exceeding Rs. 5,000. Such applications re ceived allotment in full. The offer remaine open until 30th Oct., and resulted in a furthe subscription of forty-four lakhs.

The 4 per cent. Conversion Loan of 1916-1 was issued at par in June 1916 and the tota tenders, exclusive of those received through the Post Office, amounted to Rs. 6,35 lacs, al of which were accepted by Government. Allot ments of this loan carried with them the right to convert an equivalent amount of 3½ per cent or 3 per cent. securities into the 4 per cent. Loan at the rates of 96 per cent. and 82½ per cent. respectively.

The Loan of 1917 was for an unlimited amount and was raised for the special purpose of paying a portion of India's gift of 100 million pounds towards the cost of the War.

The issue was made in various forms, *viz* :—
5% War Loan payable 1929-47 issued at 95%.
5½% War Bonds payable 1920
Do. do. 1922
Post Office 5-year cash certificates.

Applicants for the 5% Loan secured for every Rs. 100 of the 5% Loan applied for the right to convert Rs. 150 of other loans as follows :—

3% Loan converted at 65 for every Rs. 150 nominal.
3½% Loan converted at 76 for every Rs. 150 nominal.
4% Conversion Loan at 92 for every Rs. 150 nominal.

The total amount subscribed towards the ar Loan up to the end of August 1917 was ghly Rs. 50 crores.

The Loan of 1918 was also for an unlimited ount and was raised for paying a part of dia's 100 million pounds contribution for the secution of the war.

The issues were in the following forms :—

5½ per cent.	War Bonds	repayable	1921@par.
5½ per cent.	,,	,,	1923 ,,
5½ per cent.	,,		1925@103 per cent.
5½ per cent.	,	,,	1928@105 per cent.

Post Office 5 years Cash Certificate.

Special rights: War Bonds, 1921, 1923, 25 and 1928, will be accepted at par during the rency of the Bonds as the equivalent of Cash the purpose of subscription to any future g term loan issued by the Government of lia, whatever rate of interest is attached such issue.

The total amount subscribed towards the ond Indian War Loan up to the end of tember was roughly Rs. 51 crores.

Government debt may be held in the form Bearer Bonds, promissory notes or Stock tificates. Promissory notes are trans- ible by endorsement and as such trans- s do not require to be registered it fol- s that Government do not keep any record the holders of such notes from time to time. holder of a Stock Certificate is a registered der however and transfers can only be made transfer deed which must be submitted and approved of by the authorities conduct- the loan business on behalf of Government.

nterest is payable half-yearly on each loan the dates noted below :—

oan of 1842–43	1st Febry. & 1st August.
oan of 1854–55	30th June & 31st Decr.
oan of 1865	1st May & 1st Novr.
oan of 1879	16th Jany. & 16th July.
oan of 1896–97	30th June & 31st Decr.
oan of 1900–01	30th June & 31st Decr.
% Loan of 1915–16	1st June & 1st Decr.
% Loan of 1916-17	1st Apl. & 1st Oct.
& 5½% Loans of 1917	15th Feb. & 15th Aug.
% Loan of 1918	15th March and 15th Sept.

nterest may be made payable at the option he holder at the Public Debt Office Banks Bengal, Bombay or Madras, at any Govern- nt Treasury, or at the Bank of England, Lon- . In the case of Promissory Notes, presenta- of the notes at the office where interest ayable is necessary before interest can be wn but this does not apply as regards Stock ificates and interest warrants in respect hese are sent out to the registered holder oon as interest falls due. The interest on s enfaced to London is paid by rupee drafts India.

enewal, Conversion, Consolidation and Sub-Division of Promissory Notes.

RENEWAL.

When all the spaces reserved for endorse- ts on the reverse of a note have been filled or when the spaces utilised for recording ments of interest have been exhausted the note requires to be renewed before any further transfers can be allowed or interest drawn. The fee for such renewal is at the rate of ¼ per cent. on the face value of the note subject to a maximum of Re. 1 for each note but no renewal fee is charged in the case of a note on which no endorsements appear when the interest charges are expended.

CONVERSION.

Promissory Notes of the 3½ per cent. loans of 1842–43, 1854–55, 1865, 1879 and 1900–01 may be transferred to any other of those loans except that no transfer to the loan of 1900–01 from any of the other loans is admissible.

It is made a condition however before any such transfer is permitted that a full half-year's interest is due on the Promissory Note at the time it is presented for transfer.

The fees charged are the same as those applicable to renewals.

CONSOLIDATION AND SUB-DIVISION.

Notes of the same loan, on which interest has been paid up to the same date, may be consolidated or notes may be sub-divided into others of smaller denominations, but of the same loan, at the option of the proprietors, notes only being issued for Rs. 100 or multiples of Rs. 100.

The fee charged is at the rate of ¼ per cent. on the face value of the new notes received, subject to a maximum of Re. 1 for each note.

The management of the debt in England is entrusted to the Bank of England who are paid commission at the rate of £300 per million pounds in respect of the sterling debt and £400 per crore of rupees in respect of the rupee debt. The charge for the latter is however subject to a minimum of £8,000.

Quotations for 3½ per cent. Government of India Loans.

Jany.	*Rupee Loan.* Rs.	*Sterling Loan.* £
1895 ..	103·6 per cent.	112⅞ per cent.
1896 ..	105·7 ,,	117 ,,
1897 ..	98 ,,	118½ ,,
1898 ..	95·13 ,,	117 ,,
1899 ..	94 ,,	116½ ,,
1900 ..	95·10 ,,	110 ,,
1901 ..	96 ,,	108 ,,
1902 ..	95·14 ,,	108 ,,
1903 ..	97·9 ,,	107 ,,
1904 ..	95·2 ,,	103 ,,
1905 ..	98·1 ,,	106¼ ,,
1906 ..	97·14 ,,	105¼ ,,
1907 ..	95·7 ,,	104 ,,
1908 ..	96·3 ,,	102½ ,,
1909 ..	94·11 ,,	99 ,,
1910 ..	93·7 ,,	98¼ ,,
1911 ..	95·1 ,,	95¼ ,,
1912 ..	96·2 ,,	94 ,,
1913 ..	94·9 ,,	91.7–16 ,,
1914 ..	95·10 ,,	85¼ ,,
1915 ..	81 (Dec.) ,,	Nominal.
1916 ..	75·8 (Sept.) ,,	70¼ per cent.
1917 (Aug.)	69 ,,	66½ ,,
1918 ,,	72·5 ,,	68¼ ,,

Agriculture.

As crops depend on the existence of plant food and moisture in the soil so the character of the agriculture of a country depends largely on its soil and climate. It is true that geographical situation, the character of the people and other considerations have their influence which is not inconsiderable, but the limitations imposed by the nature of the soil and above all by the climate tend to the production of a certain class of agriculture under a certain given set of conditions.

The climate of India, while varying to some extent in degree, in most respects is remarkably similar in character throughout the country. The main factors in common are the monsoon, the dry winter and early summer months, and the intense heat from March till October. These have the effect of dividing the year into two agricultural seasons, the *Kharif* or Monsoon and the *Rabi* or Winter Season each bearing its own distinctive crops. From early June till October abundant rains fall over the greater part of the continent while the winter months are generally dry although North-Western India benefits from showers in December and January. The distribution of the rainfall throughout the year, which is of considerable importance to agriculture, is none too favourable, but is not quite so bad as is often represented. The rainfall is greatest at what would otherwise be the hottest time of the year, *viz.*, mid-summer and when it is most needed. It should be remembered that in a hot country intermittent showers are practically valueless as evaporation is very rapid. The distribution of rainfall such as is common in England, for example, would be of little use to Indian soils.

Soil.—For the purpose of soil classification India may be conveniently divided into two main areas in (1) The Indo-Gangetic plains, (2) Central and Southern India. The physical features of these two divisions are essentially different. The Indo-Gangetic plains (including the Punjab, Sind, the United Provinces, Bengal, Bihar and Assam) form large level stretches of alluvium of great depth. The top soil varies in texture from sand to clay, the greater part being a light loam, porous in texture, easily worked, and naturally fertile. The great depth of the alluvium tends to keep down the soil temperature. Central and Southern India on the other hand consist of hills and valleys. The higher uplands are too hot and too near the rock to be suitable for agriculture which is mainly practised in the valleys where the soil is deeper and cooler and moisture more plentiful. The main difference between the soils of the two tracts is in texture and while the greater part of the land in Northern India is porous and easily cultivated, and moist near to the surface, large stretches in Southern and Central India consist of an intractable soil called the Deccan trap, sticky in the rains, hard and crumbly in the dry weather and holding its moisture at lower levels.

Agricultural Capital and Equipment.—India is a country of small holdings and the vast majority of the people cultivate patches varying in size from one to eight acres. Large holdings are practically unknown, and are mainly confined to European planters. Farming is carried on with a minimum of capital, the being practically no outlay on fencing, buildings, or implements. The accumulation of capital is prohibited by the occurrence of famine and the high rate of interest and extravagance of expenditure in marriage celebrations. The organization of co-operative credit which has been taken in hand by Government and which has already proved successful in many provinces will undoubtedly lead to an increase in Agricultural capital.

Equipment.—For power the ryat depends chiefly on cattle which, as a rule, are light and active but possess little hauling power. The necessary tilth for crops is brought about by frequency of ploughings, the result being that the soil is seldom tilled as it should be. This is not due in any way to want of knowledge on the part of the people but through want of proper equipment. The Indian Agriculturist, as a rule, possesses an intimate knowledge of the essentials of his own business, and fails through lack of ways and means.

Implements are made of wood although ploughs are usually tipped with iron points and there is a great similarity in their shape and general design. The levelling beam is used throughout the greater part of the country in preference to the harrow and roller; and throughout Northern India the plough and the levelling beam are the only implements possessed by the ordinary cultivator.

In the heavier soils of the Deccan trap a cultivating implement consisting of a single blade resembling in shape a Dutch hoe, is much used. Seed drills and drill hoes are in use in parts of Bombay and Madras but throughout the greater part of the country the seed is either broadcasted or ploughed in. Hand implements consist of various sizes of hoes, the best-known of which are the *kodal* or spade with a blade set at an angle towards the labourer who does not use his feet in digging, and the *khurpi* or small hand hoe. Of harvesting machinery there is none, grain is separated either by treading out with oxen or beating out by hand, and winnowing by the agency of the wind.

Cultivation.—Cultivation at its best is distinctly good but in the greater part of the country it has plenty of room for improvement. As in any other country success in agriculture varies greatly with the character of the people depending largely as it does on thrift and industry. In most places considering the large population cultivation is none too good. Agriculture suffers through lack of organization and equipment. Owing to the necessity of protection against thieves, in most parts the people live in villages, many of them at considerable distances from their land. Again holdings, small though they are, have been sub-divided without any regard for convenience. Preparatory tillage generally consists of repeated ploughings, followed as seed time approaches by harrowings with the levelling beam. The *Rabi* crops generally receive more thorough cultivation than the *Kharif*, finer seed bed being necessary owing to the dryness of the growing season. Manure

The following table shows the area under the principal crops, in British India, and their territorial distribution, for 1916-17. The cropped area is always greater than the area of cultivated land, owing to double cropping. The figures represent acres :—

Province.	Rice.	Wheat.	Barley.	Other Food Grains and Pulses.	Total Food Grains and Pulses.	Oilseeds.	Sugar.	Cotton.	Jute.	Total cropped Area.	Net cropped Area after deducting Area cropped more than once.
Bengal	21,091,000	128,800	99,500	1,517,300	22,836,600	1,655,400	290,800	54,900	2,351,800	29,217,800	24,665,000
Bihar and Orissa ..	16,438,900	1,308,200	1,270,500	8,385,600	27,403,200	1,911,500	279,200	67,400	224,300	31,762,300	25,890,400
Assam	4,682,136	298	..	145,823	4,828,257	296,851	35,451	32,290	95,202	6,410,648	5,884,193
United Provinces ..	7,138,421	6,827,590	5,044,989	21,457,054	40,468,054	791,247	1,200,696	1,174,249	..	46,597,129	36,754,473
Punjab	1,063,598	9,467,240	1,153,061	12,575,007	24,258,906	1,307,577	414,110	1,064,581	..	31,704,168	26,938,748
N. W. Frontier Province.	41,897	1,050,478	248,408	1,135,678	2,476,46.	167,695	30,186	27,832	..	2,875,438	2,462,723
Burma	10,641,156	48,496	9	1,100,870	11,790,531	1,484,226	41,124	225,401	..	15,165,762	14,539,209
Central Provinces and Berar.	5,142,008	3,847,399	23,902	11,131 829	20,145,198	2,331,148	22,708	4,489,216	..	27,851,321	25,288,266
Madras	11,532,702	17,211	3,211	18,300,256	29,853,380	3,334,490	210,644	2,167,976	..	39,052,377	34,317,977
Bombay and Sind ..	3,130,891	2,271,413	47,239	18,504,283	23,953,826	1,310,063	83,282	4,487,408	..	33,328,168	32,092,197
Minor Areas	85,355	76,561	81,078	515,701	758,695	45,442	6,587	45,354	..	983,602	786,889
Total ..	80,988,124	25,043,686	7,971,897	94,769,401	208,773,108	14,635,588	2,614,788	13,836,607	2,671,302	264,948,713	229,620,075

generally applied to *Kharif* crops. Seeding is either done broadcast or by drilling behind a wooden plough or drill. Thinning and spacing are not nearly so well done as they might be, and intercultivation is generally too superficial. Harvesting is done by sickle where the crops are cut whole, and there is little waste involved. On the whole the methods of the ryats if carried out thoroughly would be quite satisfactory, but it is doubtful if this could be done with the number of cattle at his disposal.

Irrigation is necessary over the greater part of the country owing to insufficient rainfall and the vagaries of the monsoon. Canal irrigation has been greatly extended over the Punjab, Sind, United Provinces and Madras through Government canals which, in addition to securing the crops over existing cultivated land have converted large desert tracts into fertile areas. The Punjab and parts of the United Provinces are naturally well suited to canal irrigation owing to the frequency of their rivers. The water is generally taken off at a point a little distance from where the rivers leave the hills and is conducted to the arid plains below. The main canal splits up into diverging branches, which again subdivide up into distributaries from which the village channels receive their supplies. Water rates are levied on the matured areas of crops, Government thus bearing a part of the loss in case of failure. Much of the land is supplied by what is termed flow irrigation, *i.e.*, the land is directly commanded by the canal water, but a great deal has to be lifted from one to three feet the canal running in such cases below the level of the land. Rates for lift irrigation are, of course, lower than those for flow.

Irrigation canals are generally classed into (1) perennial and (2) inundation canals. Perennial canals, which give supplies in all seasons generally have their headworks near the hills, thus commanding a great range of country. Farther from the hills,owing to the very gradual slope of the land and the lowness of the rivers in the cold weather, perennial irrigation is difficult and inundation canals are resorted to. These canals only give irrigation when the rivers are high. As a rule, in Northern India they begin to flow when the rivers rise owing to the melting of the snow on the hills in May and dry up in September.

Irrigation from Wells.—About one-quarter of the total irrigation of the country is got from lifting water from wells ranging in depth from a few feet to over fifty feet. Their numbers have greatly increased in recent years largely through Government advances for their construction. The recurring cost of this form of irrigation has, however, greatly increased owing to the high price of draught cattle and the increasing cost of their maintenance.

Tank irrigation is common in Central and Southern India. Large quantities of rain water are stored in lakes (or tanks) and distributed during the drier seasons of the year. The system of distribution is the same as that by canal.

Manures.—Feeding of animals for slaughter being practically unknown in India, the amount of farm yard manure generally available in other countries from this source thus does not exist. This is partially [illegible] entirely made up for by the large nu[illegible] required for tillage and the amount of cow[illegible] buffaloes kept for milk. Unfortunately [illegible] is very scarce and a greater part of the [illegible] of animals has to be used for burning. [illegible] most of the trash from crops is used up f[illegible] same purpose and the net return of o[illegible] matter to the soil is thus insignificant [illegible] some parts cakes of oil seed are used as ma[illegible] for valuable crops like tea and sugarcane [illegible] the greater part of the country the only m[illegible] applied is the balance of farm yard m[illegible] available after fuel supplies have been sati[illegible] Farm yard manure is particularly effe[illegible] and its value is thoroughly appreciated bu[illegible] people have much to learn in the way of st[illegible] of bulky manures and the conservatio[illegible] urine.

Rice.—A reference to the crop stat[illegible] shows that rice is the most extensively g[illegible] crop in India, although it preponderates i[illegible] wetter parts of the country, *viz.*, in Be[illegible] Bihar and Burma and Madras. The [illegible] requires for its proper maturing a moist cli[illegible] with well assured rainfall. The culti[illegible] varieties are numerous, differing greatly in [illegible] lity and in suitability for various conditio[illegible] soil and climate, and the people posses[illegible] intimate acquaintance with those grow[illegible] their own localities. The better qualities [illegible] sown in seed beds and transplanted in [illegible] monsoon. Broadcasted rice is grown gene[illegible] in lowlying areas and is sown before the [illegible] soon as it must make a good start b[illegible] the floods arrive. Deep water rices grow qu[illegible] and to a great height and are generally [illegible] to keep pace with the rise in water level

For transplanted rice the soil is gene[illegible] prepared after the arrival of the monsoon [illegible] is worked in a puddle before the seedlings [illegible] transplanted. The land is laid out into s[illegible] areas with raised partitions to regulate [illegible] distribution of the water supply. The [illegible] lings are planted in small bunches contai[illegible] from 4 to 6 plants each and are sli[illegible] dibbled into the mud at distances of 6 t[illegible] inches apart. Where available, irrigation w[illegible] is given at frequent intervals and the fi[illegible] are kept more or less under water until the [illegible] begins to show signs of ripening.

Wheat.—Wheat is grown widely through[illegible] Northern India as a winter crop, the Un[illegible] Provinces and the Punjab supplying al[illegible] two-thirds of the total area, and prob[illegible] three quarters of the total outturn in In[illegible] The majority of the varieties grown belong [illegible] the Species Triticium Vulgare. Indian wh[illegible] are generally white, red and amber colou[illegible] and are mostly classed as soft from a c[illegible] mercial point of view. The grains are gener[illegible] plump and well filled but the samples are spo[illegible] through mixtures of various qualities. Indi[illegible] wheat is generally adulterated to some ext[illegible] with barley and largely with dirt from [illegible] threshing floor and although there is a g[illegible] demand in England and the Continent for [illegible] surplus produce, prices compare unfavoura[illegible] with those obtained for Canadian and Aust[illegible] lian produce. The crop is generally gro[illegible] after a summer fallow and, except in irriga[illegible] tracts, depends largely on the conservation [illegible] the soil moisture from the previous monso[illegible]

	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Net Area by professional survey	618,581,099	618,605,938	618,927,145	619,594,406	619,392,157	619,520,804	619,158,644
Area under forest	80,613,076	80,851,368	82,400,281	82,622,475	82,934,743	85,079,169	85,070,524
Not available for cultivation	149,994,347	149,605,179	146,386,582	147,169,102	145,427,217	143,930,260	143,441,598
Cultivable waste other than fallow	115,096,758	114,813,449	115,024,887	115,586,851	115,079,507	113,819,949	112,485,364
Fallow land	46,948,606	54,869,245	48,760,388	52,620,492	45,897,431	51,731,002	45,493,149
Net area sown with crops	223,064,601	215,981,683	224,165,602	219,191,773	227,611,132	221,778,167	229,620,075
Area irrigated	40,895,474	40,679,142	45,539,074	46,836,019	47,193,925	46,897,715	48,003,917
Area under Food-grains—							
Rice	78,524,391	76,636,887	78,752,493	76,907,895	77,668,882	78,679,425	80,988,124
Wheat	24,397,699	25,025,236	23,861,185	22,685,024	25,451,330	23,871,366	25,013,686
Barley	7,840,222	8,432,503	7,420,335	7,206,144	7,904,783	8,012,987	7,971,897
Jawar	21,184,164	18,386,332	20,967,730	21,405,397	21,223,398	23,050,921	21,891,980
Bajra	15,540,225	13,092,938	16,268,801	15,385,537	16,041,561	14,343,377	15,227,957
Ragi	4,288,927	4,296,207	4,455,537	4,370,376	4,250,788	4,338,380	4,072,166
Maize	6,311,627	5,591,349	6,316,089	6,166,939	6,187,729	6,735,325	6,544,212
Gram	13,946,210	14,128,881	12,422,848	9,296,672	14,364,490	13,558,533	15,699,021
Other grains and pulse	32,069,948	29,507,101	30,907,560	28,149,109	31,411,589	31,144,723	31,334,065
Total Food-grains ..	204,103,413	195,097,434	201,372,578	191,573,393	204,504,550	203,735,037	208,773,108
Area under other food-crops (including gardens, orchards, spices, &c.).	7,467,584	7,582,432	8,188,499	8,124,809	8,200,367	8,307,725	8,410,432
Area under—							
Sugar	2,540,541	2,565,770	2,712,085	2,707,373	2,458,865	2,550,608	2,614,788
Coffee	92 874	94,576	91.913	85,723	86,712	91,003	90,602
Tea	532,703	543,565	557,856	572,106	584,379	593,364	603,510

Rains in January and February are generally beneficial but an excess of rainfall in these months usually produces rust with a diminution of the yield. On irrigated land 2 to 4 waterings are generally given. The crop is generally harvested in March and April and the threshing and winnowing go on up till the end of May. In good years the surplus crop is bought up at once by exporters and no time is lost in putting it on the European market as other supplies are at that time of year scarce. In years of famines the local price is generally sufficiently high to restrict exports.

The Millets.—These constitute one of the most important group of crops in the country, supplying food for the poorer classes and fodder for the cattle. The varieties vary greatly in quality, height and suitability to various climatic and soil conditions. Perhaps the two best known varieties are Jowar (Sorghum vulgare) tall growing with a large open head, and Bajra with a close rat-tail head and thin stem. Generally speaking the jowars require better land than the bajras and the distribution of the two crops follows the quality of the soil. Neither for jowar nor bajra is manure applied and cultivation is not so thorough as for wheat, the main objective being to produce a fine seed bed. As the crop is generally sown in the beginning of the monsoon it requires to be thoroughly weeded. It is often grown mixed with the summer pulses and other crops in which case thin seedings are resorted to. The subsidiary crops are harvested as they ripen either before the millet is harvested or afterwards. The produce is consumed in the country.

Pulses are commonly grown throughout India and the grain forms one of the chief foods of the people. Most kinds do well but are subject to failure or shortage of yield owing to a variety of circumstances among which rain at the time of flowering appears to be one of the most important. They are therefore more suitable to grow as mixed crops especially with cereals, and are generally grown as such. Being deep rooted and practically independent of a Nitrogen supply in the soil they withstand drought and form a good alternation in a cereal rotation. The chief crops under this heading are gram, mash, mung and moth, gram forming the main winter pulse crop while the others are grown in the summer. The pulses grow best on land which has had a good deep cultivation. A fine seed bed is not necessary. For gram especially the soil should be loose and well aerated. Indian pulses are not largely exported although they are used to some extent in Europe as food for dairy cows.

Cotton is one of the chief exports from India and the crop is widely grown in the drier parts of the country. The lint from Indian cotton is generally speaking short and coarse in fibre and unsuited for English mills. Japan and the Continent are the chief buyers. The crop is grown during the summer months and requires a deep moist soil and light rainfall for its proper growth. Rain immediately after sowing or during the flowering period is injurious. In parts of Central and Southern India the seed is sown in lines and the crop receives careful attention but over Northern India it is sown broadcast (o mixed with other crops) and from the date sowing till the time of picking is practic left to itself. The average yield, which d not amount to more than 400 lbs. per acre seed cotton, could doubtless be greatly increa by better cultivation.

Sugarcane.—Although India is not nat ally suited for sugarcane growing, some millions of acres are annually sown. crop is mostly grown in the submontane tra of Northern India. The common varie are thin and hard, yielding a low percent of juice of fair quality. In India white sugar not made by the grower who simply boils do the juice and does not remove the molasses. product called gur or gul is generally s and consumed as such, although in some pa a certain amount of sugar-making is carr on. The profits, however, are small owing the cheapness of imported sugar and th appears to be some danger to the crop if present taste for gur were to die out. question has been taken up by Governm and a cane-breeding station has been recen opened near Coimbatore in Madras with object of raising seedling canes and otherw improving the supply of cane sets. A numb of sugar factories of a modern type have b set up within recent years in Bihar and t United Provinces. The chief difficulty see to be the obtaining of a sufficiently large sup of canes to offset the heavy capital char of the undertakings.

Oilseeds.—The crops classified under t heading are chiefly sesamum, linseed a the cruciferous oilseeds (rape, mustard, et Although oilseeds are subject to great fluctu tion in price and the crops themselves more or less precarious by nature—they co an immense area.

Linseed requires a deep and moist s and is thus grown chiefly in Bengal, Bih the United Provinces and the Central P vinces. The crop is grown for seed and n for fibre and the common varieties are of much shorter habit of growth than those Europe. The yield varies greatly from prac cally nothing up to 500 or 600 lbs. of seed p acre. The seed is mainly exported whole b a certain amount of oil pressing is done in t country.

Sesamum (or Gingelly) is grown most in Peninsular India as an autumn or wint crop. The seed is mostly exported.

The Cruciferous Oilseeds form important group of crops in Northern Ind where they grow freely and attain a fair sta of development. They are one of the mo useful crops in the rotation. They occupy t land for a few months only, and owing to the dense growth leave the soil clean and in goo condition after their removal. A number varieties are grown differing from each oth in habit of growth, time of ripening, and siz and quality of seed. The best known are rap toria, and sarson. The crop is generally sow in September or early October and harveste from December to February. The crop subject to the attack of aphis (green fly) at th time of flowering and sometimes suffers co siderable damage from this pest. The see

	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Area under Oilseeds—							
Linseed	2,512,032	3,763,222	3,125,067	2,268,801	2,525,432	2,451,049	2,558,074
Sesamum (til)	4,211,829	4,174,341	4,164,045	4,278,855	4,478,128	4,135,086	4,014,078
Rape and Mustard	3,898,746	4,223,598	3,555,300	4,083,135	4,144,374	4,075,575	4,010,944
Other Oilseeds	3,911,623	4,333,704	4,091,368	4,027,236	4,185,657	3,573,879	4,052,492
Total Oilseeds	14,534,230	16,494,865	14,935,780	14,658,027	15,333,591	14,235,589	14,635,588
Area under—							
Cotton	14,447,690	14,568,189	14,138,497	15,844,363	15,221,787	11,435,135	13,836,607
Jute	2,828,669	3,090,827	3,323,951	3,135,585	3,308,718	2,349,381	2,671,302
Other fibres	769,594	688,868	805,911	915,303	976,142	787,351	830,540
Indigo	282,119	274,476	227,046	169,221	145,792	351,265	764,823
Opium	383,335	220,164	197,314	170,503	178,582	182,030	216,899
Tobacco	1,067,682	998,943	964,726	1,001,710	1,056,349	1,027,038	1,041,303
Fodder crops	4,881,742	4,977,924	5,770,466	5,910,087	6,362,511	7,076,258	8,173,058
Estimated yield* of—							
Rice (Cleaned) *cwt.*	557,938,000	601,480,000	569,700,000	575,800,000	544,840,000	656,480,000	695,820,000
Wheat *tons*	10,061,500	9,924,500	9,853,000	8,358,000	10,087,000	3,652,000	10,234,000
Coffee *lb.*	‡	‡	‡	‡	‡	‡	‡
Tea † ,,	263,269,400	268,602,700	297,878,100	307,249,600	312,976,200	371,836,700	368,583,000
Cotton 400 *lb. bales*	3,853,000	3,288,000	4,610,000	5,066,000	5,209,000	3,738,000	4,489,000
Jute ,, ,,	7,932,000	8,234,700	9,342,800	8,893,900	10,443,900	7,340,900	8,306,000
Linseed *tons*	571,300	644,900	542,100	386,200	397,000	476,000	526,000
Rape and Mustard ,,	1,250,100	1,325,700	1,241,200	1,087,500	1,219,200	1,102,100	1,191,000
Sesamum (til) ,,	511,800	397,600	474,000	403,500	551,000	482,000	513,000
Groundnut ,,	503,200	605,700	669,900	748,800	947,700	1,058,000	1,196,000
Indigo *cwt.*	46,000	47,700	39,100	26,800	25,200	55,100	96,000
Cane-sugar *tons*	2,217,800	2,451,100	2,583,600	2,291,500	2,462,000	2,634,000	2,730,000

* The acreage of crops given in this table is for British India only, but the estimated yield includes the crops in certain of the Native States.

† The statistics of the production of tea are for calendar years.

‡ Return of production discontinued.

is very subject to injury from rain and great care has to be taken in the drying. The produce is largely exported whole, but there is a considerable amount of local oil-pressing—the cake being in demand for feeding purposes.

Jute.—Two varieties of the plant are cultivated as a crop, Capsularis and Olitorius. Jute growing is confined almost entirely to Eastern Bengal, in the Ganges-Brahmaputra Delta. The crop requires a rich moist soil. Owing to river inundation this part of India receives a considerable alluvial deposit every year and the land is thus able to sustain this exhausting crop without manure The crop is rather delicate when young, but once established requires no attention, and grows to a great height (10 to 11 feet). Before ripening the crop is cut and rotted in water. After about three weeks submersion the fibre is removed by washing and beating. At the present high range of prices jute may be considered to be the best paying crop in India.

Tobacco is grown here and there all over the country chiefly, however, in Bengal, Bihar, Bombay, Madras and Burma. Of two varieties cultivated Nicotiana Tabacum is by far the most common. Maximum crops are obtained on deep and moist alluvium soils and a high standard of cultivation including liberal manuring is necessary. The crop is only suited to small holdings where labour is plentiful as the attention necessary for its proper cultivation is very great. The seed is germinated in seed beds and the young plants are transplanted when a few inches high, great care being taken to shield them from the sun. The crop is very carefully weeded and hoed. It is topped after attaining a height of, say, 2 ft., and all suckers are removed. The crop ripens from February onwards and is cut just before the leaves are become brittle. By varying the degree of fermentation of the leaves different qualities of tobacco are obtained. A black tobacco is required for *Hooka* smoking and this is t most common product but a certain amou of yellow leaf is grown for cigar making.

Live-stock consist mainly of catt buffaloes and goats, horses not being used i agricultural purposes. Sheep are of seconda importance.

For draught purposes cattle are in mo general use than buffaloes especially in t drier parts of the country, but buffaloes a very largely used in the low lying rice tract For dairying buffaloes are perhaps more pr fitable than cows as they give richer milk ar more of it: but they require more feedin The poorer people depend largely on the mi of goats of which there are an enormous numb throughout India. Cattle breeding is carri on mainly in the non-cultivated tracts in Centr and Southern India, Southern Punjab an Rajputana, where distinct breeds with defini characters have been preserved. The be known draught breeds are Hansi, Nellor Amritmehal, Gujrat, Malvi, and the fine milk cows are the Sahiwal (Punjab) Gir (K thiawar) and Sind. Owing, however, to th encroachment of cultivation on the grazin areas well-bred cattle are becoming scarc and some of the breeds are threatened wit extinction. Efforts to improve the qualit of the cattle in the non-breeding districts b the use of selected bulls have hitherto bee frustrated by the promiscuous breeding whic goes on in the villages.

Dairying.—Though little noticed, dairyin forms a very large indigenous industry through out India. The best known products ar native butter (ghee) and cheese (dahi). Durin recent years a considerable trade in tinne butter has sprung up in Gujrat (Bomba Presidency). While pure *ghee* and milk ca be procured in the villages, in the towns dair products can scarcely be bought unadulter ated.

AGRICULTURAL PROGRESS.

The Agricultural Departments in India as they now exist may be said to be a creation of the last ten years. There have for a good many years past been experimental farms, under official control, in various parts of India, but they were in the past to a large extent in the hands of amateurs, and the work of the Agricultural Departments, with which all the major provinces were provided by about 1884, was in the main confined to the simplification of revenue settlement procedure and the improvement of the land records system. In 1901 the appointment of an Inspector-General of Agriculture gave the Imperial Agricultural Department for the first time an expert head, and placed the Government of India in a position to enlarge the scope of their own operations and to co-ordinate the work being done on independent lines in various provinces. At that time the staff attached to the Government of India consisted of an Agricultural Chemist and a Crytogamic Botanist, while trained Deputy Directors of Agriculture were employed only in Madras, Bombay and the United Province and the Economic Botanist in Madras was the only provincial representative of the more specialised type of appointments. Within the next few years a number of new appointments were made, so that by March 1905 there were altogether 20 sanctioned agricultural posts; of these seven were Imperial, including a number of specialist appointments attached to the Agricultural Research Institute and College, the establishment of which at Pusa in Bengal was sanctioned in 1903. A great impetus was given to the development of the Agricultural Departments by the decision of the Government of India in 1905 to set apart a sum of 20 lakhs (£133,000) a year for the development of agricultural experiment, research, demonstration and instruction. Their ultimate aim, as then expressed, was the establishment of an experimental farm in each large tract of country in which the agricultural conditions are approximately homogeneous, to be supplemented by numerous small demonstration farms; the creation of an agricultural college teaching up to a three years' course in each of the larger provinces: and the provision of an expert staff in connection with these colleges for purposes of research as well as education. The eventual cost, it was recognised, would largely exceed 20 lakhs a year. The Pusa Research Institute and College alone has cost nearly £150,000 including equipment. A part of the cost was met from a sum of £30,000 placed at Lord Curzon's dis-

AREA, CULTIVATED and UNCULTIVATED, in 1916-17 : IN ACRES.

Administrations.	Area according to Survey.	DEDUCT.			NET AREA.	
		Feudatory and Tributary States.	Area for which no returns exist.	Total.	According to Survey.	According to Village Papers.
engal	53,931,504	3,451,520	....	3,451,520	50,479,984	50,479,984
adras	97,839,997	6,790,660	....	6,790,660	91,049,337	89,530,706
ombay { Presidency.	85,705,337	37,004,800	....	37,004,800	48,700,537	48,700,537
ombay { Sind ..	33,975,088	3,872,000	....	3,872,000	30,103,008	30,103,088
nited { Agra ..	57,342,219	4,345,232	....	4,345,232	52,996,987	52,758,656
Provinces { Oudh ..	15,306,720	....	....	....	15,306,720	15,485,417
har and Orissa ..	71,137,505	18,334,720	....	18,334,720	52,802,785	52,802,785
njab	86,367,319	24,511,384	....	24,511,384	61,855,935	60,159,986
rma.. { Upper ..	57,226,906	3,375,130	....	3,375,130	53,851,776	53,851,776
rma.. { Lower ..	55,201,786	....	....	....	55,201,786	55,201,786
ntral Provinces..	72,552,216	19,960,343	....	19,960,343	52,591,873	52,603,542
rar	11,374,574	....	....	....	11,374,574	11,374,574
sam	39,275,494	7,969,920	....	7,969,920	31,305,574	31,305,574
rth-West Frontier Province.	8,497,558	140,800	....	140,800	8,356,758	8,571,369
mer-Merwara ..	1,770,918	....	....	....	1,770,918	1,770,918
lhi	366,406	....	....	....	366,406	366,406
org	1,012,260	....	....	....	1,012,260	1,012,260
npur Pargana* .	31,346	....	....	....	31,346	31,346
Total ..	748,915,153	129,756,509	....	129,756,509	619,158,644	616,110,710

dministrations.	CULTIVATED.		UNCULTIVATED.		Forests.
	Net Area actually Cropped.	Current Fallows.	Culturable Waste other than Fallow.	Not available for Cultivation.	
gal	24,665,000	5,201,924	5,126,667	11,202,908	4,283,485
ras	34,317,977	8,469,697	11,458,723	22,277,665	13,006,644
bay { Presidency	27,470,113	5,840,725	1,225,948	5,632,594	8,531,157
bay { Sind ..	4,622,084	4,845,100	5,912,863	13,908,331	814,710
ted { Agra ..	27,394,359	1,642,390	7,286,631	7,712,821	8,722,455
ro- { Oudh ..	9,360,114	462,956	2,820,257	2,228,549	613,541
ar and Orissa ..	25,890,400	4,804,440	6,665,798	9,648,390	5,793,757
jab	26,938,748	2,296,418	16,148,824	12,546,095	2,229,901
ma { Upper ..	5,222,511	4,127,148	10,463,402	20,929,700	13,109,015
ma { Lower ..	9,316,698	784,542	14,790,227	23,064,381	7,245,938
ral Provinces ..	18,371,315	2,400,597	13,228,068	3,966,554	14,637,008
ar	6,916,951	1,225,426	139,469	952,304	2,140,424
am	5,884,193	2,479,495	14,338,342	5,510,500	3,093,044
th-West Frontier Province.	2,462,723	487,697	2,639,977	2,614,015	366,957
er-Merwara ..	419,625	243,811	168,872	841,828	96,782
i	217,986	12,077	53,878	69,852	12,613
g	142,093	168,282	10,243	334,232	357,410
pur Pargana* .	7,185	424	7,175	879	15,083
Total ..	229,620,075	45,493,149	112,485,364	143,441,598	85,070,524

* A British District in Central India.

posal by Mr. Phipps, an American visitor to India. This example of munificence has recently been followed by Sir Sassoon J. David, who placed the sum of £53,300 at the disposal of the Government of Bombay for the establishment of vernacular agricultural schools and the improvement of agricultural methods, in commemoration of the visit of Their Imperial Majesties to India.

Record of Progress.

At the beginning of 1912 there were over 40 posts in the Indian Agricultural Service, besides that of Inspector-General, which was abolished at the end of the year 1911-12, the rapid advance of the provincial departments having rendered its continuance unnecessary. The officers serving directly under the Government of India included the Director of the Pusa Institute, who was also Principal of the Agricultural College, a cotton specialist, two mycologists, three entomologists, two agricultural chemists, and an economic botanist. Some of these were supernumerary officers undergoing training. The provincial agricultural departments vary in strength. Generally speaking, each of the larger provinces has at least a Deputy-Director of Agriculture (most provinces have two), an Agricultural Chemist, and an Economic Botanist. In several provinces the principalship of the Agricultural College is a separate appointment and among the remaining officers are a fibre expert in Eastern Bengal and Assam, and a "scientific officer for planting industries in Southern India" in Madras. The Government of Madras have also a mycologist and an entomologist of their own. The posts so far referred to have hitherto necessarily been filled almost exclusively by the appointment of trained specialists from the United Kingdom. There are also in the various provinces a considerable number of locally appointed Assistant Professors (in the Agricultural Colleges), Assistant Agriculturists and Entomologists, Agricultural Inspectors, Superintendents of Farms, etc., and subordinate officers. It is an essential part of the scheme adopted that facilities for the best agricultural training shall be made available in India, in order that the country may become self-supporting, so far as possible, in regard to the scientific development of agricultural methods on lines suited to local conditions. Provincial agricultural colleges, which are also research stations, have within the last few years been established in Madras, Bombay, Bengal, the United Provinces, the Punjab and the Central Provinces. The Central College at Pusa is intended to provide for more advanced training, and gives also short practical courses in subjects not at present taught in the provincial colleges. The Provincial Directors of Agriculture have so far been selected from the ranks of the Indian Civil Service, and they still in some provinces have other functions besides the supervision of the Agricultural Department: but in all the larger provinces except the United Provinces the appointment of Director of Agriculture has since 1905 been separated from that of Director of Land Records.

Machinery.

The rapid extension in India in recent years of the use of machinery in connection with agriculture and irrigation has created a demand for expert assistance to meet which A cultural Engineers have since the end of period under review been appointed in Bon and the United Provinces to advise cultiva as to engines, pumps, threshing machinery, An important advance in the direction bringing the provincial agricultural departm more closely into touch with one another made in 1905 by the creation of the Board Agriculture. The Board, which includes Imperial and provincial experts, meets annu to discuss the programme of agricultural w and agricultural questions generally, and m recommendations which are submitted to Government of India for consideration.

Work of the Departments.

The work of the Agricultural Department two main aspects. On the one hand, by ex ment and research, improved methods or c are developed, or the means of combatin pest are worked out; on the other hand, a tained improvements must be demonstr and introduced as far as possible into the tice of the Indian cultivator. There is essential difference between agricultural partments in the East and in the West in whereas the latter have arisen to meet spontaneous demands of the cultivators o soil, the former are entirely the creation government anxious to give all the assist it can to its agricultural subjects. The den for improved agriculture has not in Ir except in special cases, come from the cul tor, and it is necessary for the Departmen put forth every effort, first to ascertain the n of the cultivators and then to demonstrate they can most effectively be met. It is on few years since work on modern lines was c menced by the reorganised agricultural de ments, and, in the first place, a great de spade work had to be performed.

Cotton.

Cotton from the first received much the attention of the new departm Very striking results have already achieved, and more particularly with Cambo and other exotic varieties. The second of improvement is the separation and selec of indigenous varieties. In Madras the ef of the Agricultural Department have rest in the spread of the local improved va called *Karungany* in the Tinnevelly District white-seeded Tellapathi cotton in Kur both of these varieties having been selec from among the mixtures ordinarily grow the districts. A system of seed distribu was gradually built up, and now, after five six years' work, there is a vast area u *Karungany*. The Department supplies pure to contract seed growers and buys the s cotton from these men, gins it, and arranges distribution of seed through village de In Bombay, two have been selected as the out of many hybrids and pure line cot bred and tried for many years on the S farm. They give a distinct advantage in quantity and quality over the ordinary cotton, and promise to sell at rates 5 per c higher. In another part of the province arra ments are being made to distribute on a l scale seed of another improved form, which be grown, it is estimated, over 1,300,000 a In the Southern Maratha Country, Br

AREA, UNDER IRRIGATION IN 1916-17 : IN ACRES.

Administrations.	Total Area Cropped.	AREA IRRIGATED.			
		By Canals.		By Tanks.	By Wells.
		Government.	Private.		
Bengal	29,217,800	121,634	175,132	853,541	12,685
Madras	39,052,377	3,475,261	226,294	4,161,746	1,575,987
Bombay .. { Presidency.	28,298,955	129,371	84,740	124,043	530,220
Bombay .. { Sind ..	5,029,210	3,312,237	20,081	....	35,093
United Provinces. { Agra ..	34,183,195	2,367,669	30,466	64,467	3,977,410
United Provinces. { Oudh ..	12,413,934	....	....	....	1,505,238
Bihar and Orissa	31,762,300	843,752	642,628	1,401,581	640,259
Punjab	31,704,168	8,071,588	521,182	10,118	3,433,076
Burma .. { Upper ..	5,813,436	507,075	209,181	204,665	17,729
Burma .. { Lower ..	9,352,226	297	28,987	3,908	2,766
Central Provinces	20,902,658	79,243	1,911	327,987	85,380
Berar	6,948,663	....	....	473	30,185
Assam	6,410,648	120	133,233	....	....
North-West Frontier Province.	2,875,438	323,136	463,720	....	94,752
Ajmer-Merwara	493,772	....	....	42,324	77,483
Delhi	339,027	20,965	....	411	14,591
Coorg	143,121	2,356	....	1,573	....
Panjpur Pargana	7,682	....	....	....	112
Total ..	264,948,713	19,254,704	2,537,555	7,195,937	12,032,966

Administrations.	AREA IRRIGATED.		CROPS IRRIGATED.*			
	Other Sources.	Total Area Irrigated.	Wheat.	Other Cereals and Pulses.	Miscellaneous Food Crops.	Other Crops.
Bengal	1,047,282	2,210,274	25,115	1,626,185	711,117	313,186
Madras	513,762	9,953,050	3,583	9,745,353	1,128,347	538,837
Bombay .. { Presidency	45,623	913,997	192,992	467,502	208,733	153,583
Bombay .. { Sind ..	418,668	3,786,079	532,078	3,009,723	73,053	569,990
United Provinces. { Agra ..	1,821,946	8,261,958	2,683,383	4,429,723	196,433	1,523,096
United Provinces. { Oudh ..	1,236,976	2,792,214	1,172,798	1,316,698	58,820	288,431
Bihar and Orissa	1,031,738	4,559,958	367,953	3,416,838	617,377	164,143
Punjab	159,751	12,195,715	4,934,509	3,382,057	527,343	3,677,938
Burma .. { Upper ..	138,837	1,077,487	..	1,061,634	45,923	883
Burma .. { Lower ..	160,367	195,425	..	183,439	9,014	3,478
Central Provinces	23,078	522,599	42,081	412,202	65,891	2,425
Berar	526	31,184	7,087	846	21,577	1,674
Assam	244,910	378,263	20	372,022	3,244	2,977
North-West Frontier Province.	84,197	965,805	312,194	475,737	54,516	129,923
Ajmer-Merwara	94	119,901	21,718	55,763	27,187	19,774
Delhi	..	35,967	14,008	4,425	10,580	7,142
Coorg	..	3,929	..	3,929	..	..
Panjpur Pargana	..	112	72	40	..	..
Total ..	6,982,755	48,003,917	10,309,591	29,964,116	3,759,155	7,397,480

* Includes the area irrigated at both harvests.

cotton, introduced by the Department, is gaining favour. There is said to be scope for 250,000 acres, and the increased profit to the cultivator is estimated at £1 or more per acre. In the Central Provinces also, two indigenous varieties have been selected. In the United Provinces seed of a superior variety is being distributed. **Wheat** also has been the subject of prolonged experiments. One of the first results of the investigations carried out at Pusa, was the demonstration of the fact that varieties with milling and baking qualities similar to those of the best wheats on the English market could be grown to perfection in Bihar. By the application of modern methods of selection and hybridisation these high grain qualities were successfully combined with high yielding power, rust-resistance, and strong straw.

Another crop with which considerable success has been attained is **Ground-nut**, the cultivation of which had at the beginning of the decade fallen off, owing partly to the prevalence of a fungoid disease and partly to deficient rainfall. Exotic varieties with a better yield have been introduced in Bombay, and in Burma cultivation has advanced with extraordinary rapidity.

A Press note issued by the Government of Bombay in 1917 details the result of investigations with reference to the value of ground-nut cake as a relatively cheap article of food. It states that with the introduction of certain improvements in the method of oil expression a cake can be obtained, which conforms to a definite standard of purity. This standard is reached without any serious financial outlay on the part of the oil mill owner and with his existing machinery. This standard article has been called *nutramine* both for the sake of simplification of description, and also to indicate its origin and nutritive value. By the improved process, all objections to the ground-nut as an article of food are removed and having obtained a good flour, the possibilities of utilizing it are almost unlimited. The preparation of nutramine biscuits has so far been attended with success and everyone who has sampled them has expressed satisfaction. Bread made with nutramine flour alone is apt to be heavy unless eggs are used as recommended in the previous paper. Using a mixture of nutramine and wheat flour in the ratio of 1 to 4 good results are obtained for both bread and biscuits. On the whole such a mixture is preferable, although very palatable biscuits can be made from nutramine alone.

Another success of marked importance achieved by the efforts of the provincial agricultural departments is the introduction of **agricultural implements** and machinery suited to the conditions of different provinces. Information and assistance in regard to the choice of implements suitable for various conditions has, under present circumstances, to be interpreted and brought home to Indian cultivators by a more direct agency than business firms, and the agricultural departments have therefore to do a good deal of this work. They have succeeded already in introducing various kinds of implements in different parts of the country. Every assistance is given in the use and repair of implements recommended. Up to the present, the departments perform to a certain extent the functions of dealers in implements, but it is becoming difficult to control the work as the area covered by the introductions is gradually becoming large, and a need for the development of co-operative societies is felt. In Bombay, the Department has introduced ploughs of various patterns and is selling a larger number each year. In some provinces iron ploughs are becoming very popular. The possibilities of improved harrows, cultivators, and clod-crushers are also receiving attention.

Cotton Staples:—A small commission, under the chairmanship of Mr. J. MacKenna, I. C. S., is now taking evidence in India on the general question of improving the staple and marketing of the Indian cotton crop.

TEN YEARS' PROGRESS.

n 1915, Mr. James Mackenna, I.C.S., Director of Agriculture in Burma, published a brochure in which he reviewed the progress in Agriculture in India in the last ten years. In this, reviewing the effects of the work of the new Agricultural Departments, he said:—

The Agricultural Departments are now regarded as an integral and important part of the administration. The few European and Indian workers of 1905—158 in all—now number 866. Their labours are concentrated and co-ordinated: they now work on general schemes of development. Farms and demonstration plots, formerly scattered and disconnected, have increased from 35 to 374, and work on them is concentrated on the main problems, and not dissipated as used to be the case over a number of subsidiary and unimportant enquiries.

"As a result the Department can claim credit for a great advance in general agricultural practice. Cultural and manurial problems have in many cases been solved. Local machines have been improved and adapted, or better implements introduced. Real and substantial work has been done on the improvement of such important crops as wheat, cotton, rice, sugarcane and tobacco. The general principles of crop improvement have naturally been dealt with first; but given more men and more money all the crops of India will be taken up.

"Money spent on agriculture is a good investment, but material results are difficult to gauge. Many factors have to be considered. A whole industry threatened by destruction may be saved by the discovery and application of preventive and protective methods. The treatment of the palm industry and areca-nut industry of Madras and the protection of the potato crop of Patna are illustrations of this kind. Again, there are the direct gains following the introduction of new or improved crops, implements, well-boring and improved methods of cultivation. We may, at a conservative estimate, claim that the increase to the value of the agricultural products of India as a result of the labours of its Agricultural Departments is already about 3½ crores of rupees annually, or over £2,300,000. This is the result of only ten years' work, and it must be remembered that every year will show a progressive increase. On the debit side we have an annual expenditure on agriculture which has risen from Rs. 8,81,124 or £58,742 in 1904-05 to Rs. 51,30,652 or £342,043 in 1913-14."

CROPS UNDER CULTIVATION IN 1916-17: IN ACRES.

Administrations.	Rice.	Wheat.	Barley.	Jawar or Cholum (Great Millet).	Bajra or Cumbu (Spiked Millet).	Ragi or Marua (Millet).
Bengal	21,091,000	128,800	99,500	2,700	5,800	11,700
Madras	11,532,702	17,211	3,211	4,760,647	3,410,870	2,398,646
Bombay — Presidency	1,860,034	1,664,445	24,666	7,299,230	4,527,062	634,336
Bombay — Sind	1,270,857	606,968	22,573	760,781	1,138,882	762
United Provinces — Agra	4,500,340	5,039,147	3,794,696	2,091,816	2,173,554	151,055
United Provinces — Oudh	2,638,081	1,788,443	1,250,293	310,005	374,648	38,785
Bihar and Orissa	16,438,900	1,308,200	1,270,500	78,900	70,300	783,700
Punjab	1,063,598	8,467,210	1,153,061	1,495,714	3,033,211	32,692
Burma — Upper	2,185,443	48,485	9	684,778	..	500
Burma — Lower	8,455,713	11	..	712	..	1
Central Provinces	5,111,912	3,399,587	23,781	2,034,559	37,294	13,285
Berar	30,156	447,812	121	2,153,217	80,926	389
Assam	4,682,136	298	..	..	..	1,920
North-West Frontier Province.	41,897	1,050,478	248,408	106,802	262,049	..
Ajmer-Merwara	479	26,998	63,571	89,708	54,461	379
Delhi	106	47,908	17,505	21,292	58,885	27
Coorg	84,699	..	..	..	..	3,989
Manpur Pargana	71	1,655	2	3,116	15	..
TOTAL	80,988,124	25,043,686	7,971,897	21,891,980	15,227,957	4,072,166

Administrations.	Maize.	Gram (pulse).	Other Food Grains and Pulses.	Total Food Grains and pulses.	Linseed.	Sesamum (Til or Jinjili).
Bengal	87,900	183,000	1,226,200	22,836,600	157,400	234,100
Madras	118,367	175,364	7,436,362	29,853,380	13,789	779,196
Bombay — Presidency	175,824	626,523	2,895,008	19,707,128	155,376	304,443
Bombay — Sind	1,540	158,198	286,134	4,246,698	2	34,117
United Provinces — Agra	1,624,529	4,751,340	4,820,622	28,947,099	273,379	270,732
United Provinces — Oudh	794,892	1,720,805	2,605,003	11,520,955	56,504	6,006
Bihar and Orissa	1,581,700	1,396,600	4,474,400	27,403,200	677,500	190,300
Punjab	1,270,420	5,115,944	1,629,026	24,258,906	31,832	245,972
Burma — Upper	156,135	64,966	163,952	3,304,268	122	1,150,935
Burma — Lower	25,812	3,463	551	8,486,263	336	68,018
Central Provinces	158,005	1,009,416	4,883,471	16,671,310	1,131,881	600,161
Berar	889	142,152	618,226	3,473,888	47,801	81,604
Assam	18,713	*	125,190	4,828,257	11,663	6,906
North-West Frontier Province	451,224	210,047	105,556	2,476,461	14	3,876
Ajmer-Merwara	73,566	31,642	47,361	388,165	369	37,364
Delhi	3,578	108,555	15,621	273,477	..	70
Coorg	..	202	1,280	90,170	..	84
Manpur Pargana	1,118	804	102	6,883	106	194
TOTAL	6,544,212	15,699,021	31,334,065	208,773,108	2,558,074	4,014,078

* Included under "Other Food Grains and Pulses."

CROPS UNDER CULTIVATION IN 1916-17: IN ACRES.

Administrations.	Rape and Mustard.	Groundnut.	Other Oil Seeds.	Total Oil Seeds.	Condiments and Spices.	Sugar Cane.	Sugar Others†.
Bengal	1,225,200	..	38,700	1,655,400	174,100	220,100	70,700
Madras	47,776	1,798,418	697,311	3,334,490	724,664	114,371	96,273
Bombay { Presidency.	7,255	219,940	275,813	962,827	226,631	75,920	1,028
Bombay { Sind..	295,572	4	17,541	347,236	11,427	4,023	2,311
United Provinces. { Agra..	105,693	2,617	19,977	672,398	118,700	956,349	..
United Provinces. { Oudh.	50,217	5,623	499	118,849	24,068	244,317	..
Bihar and Orissa .	757,800	..	285,900	1,911,500	78,100	279,000	200
Punjab	1,016,012	..	13,761	1,307,577	56,396	414,110	..
Burma.. { Upper.	286	256,808	13	1,408,164	78,800	3,498	22,077
Burma.. { Lower.	3,020	4,585	103	76,062	22,908	14,858	691
Central Provinces.	54,857	7,281	333,017	2,127,297	68,705	21,061	..
Berar	1,399	2,776	70,271	203,851	25,175	1,647	..
Assam	278,282	..	..	296,851	1,000	35,451	..
North-West Frontier Province.	163,160	..	594	167,644	5,118	30,186	..
Ajmer-Merwara .	803	..	2,599	41,135	8,230	68	..
Delhi	3,608	..	84	3,762	1,581	6,453	..
Coorg	4	..	2	9	3,451	44	..
Manpur Pargana	..	..	155	455	..	22	..
Total ..	4,010,944	1,296,152	1,756,340	14,635,588	1,629,054	2,421,508	193,280

† Area under sugar-yielding plants other than sugarcane.

Administrations.	Cotton.	Jute.	Other Fibres.	Total Fibres.	Indigo.	Other Dyes.
Bengal	54,900	2,351,800	43,100	2,449,800	2,200	..
Madras	2,167,976	....	201,087	2,369,063	459,066	4,393
Bombay { Presidency ..	4,252,519	....	157,580	4,410,099	347	496,197
Bombay { Sind	234,889	....	888	235,777	3,222	705
United Provinces. { Agra	1,144,325	....	144,384	1,288,709	150,175	964
United Provinces. { Oudh	29,924	....	33,249	63,173	8,446	175
Bihar and Orissa	67,400	224,300	32,500	324,200	80,600	9,200
Punjab	1,064,581	....	51,664	1,116,245	60,366	4,138
Burma.. { Upper	197,924	....	91	198,015	263	..
Burma.. { Lower	27,477	....	566	28,043	..	..
Central Provinces.. ..	1,316,144	....	90,490	1,436,634	31	49
Berar	3,143,072	....	73,460	3,216,532	32	..
Assam	32,290	95,202	3	127,495	..	..
North-West Frontier Province.	27,832	....	870	28,702	2	33
Ajmer-Merwara	42,758	....	26	42,784	30	..
Delhi	2,340	....	540	2,880	43	2
Coorg	1	....	4	5	..	..
Manpur Pargana	255	....	38	293	..	..
Total ..	13,836,607	2,671,302	830,540	17,338,449	764,823	515,856

CROPS UNDER CULTIVATION IN 1916-17: IN ACRES.

Administrations.	Opium.	Tea.	Coffee.	Tobacco.	Other Drugs and Narcotics.	Fodder Crops.
Bengal	..	165,800	..	311,900	3,900	112,000
Madras	..	25,707	47,754	207,741	149,703	347,161
Bombay .. Presidency.	..	20	50	95,077	28,367	1,712,837
Bombay .. Sind ..	..	..	..	7,926	95	37,568
United Provinces Agra ..	115,325	8,018	..	83,722	3,002	1,025,915
United Provinces Oudh ..	99,088	..	..	15,047	1,112	161,578
Bihar and Orissa	..	2,200	..	118,100	..	39,500
Punjab	2,286	9,874	..	67,621	1,756	4,056,279
Burma .. Upper ..	200	2,299	78	27,573	1,080	81,418
Burma .. Lower ..	..	..	3	56,699	38,187	3,233
Central Provinces	..	..	..	16,514	100	463,635
Berar	..	..	..	10,891	..	163
Assam	..	389,303	..	9,677	..	..
North-West Frontier Province.	..	..	..	11,687	121	87,803
Ajmer-Merwara	..	..	..	37	66	525
Delhi	..	..	..	1,084	..	43,443
Coorg	..	289	42,717	7	237	..
Manpur Pargana	..	..	..	..	..	..
Total ..	216,899	603,510	90,602	1,041,303	227,726	8,173,058

Administrations.	Fruits and Vegetables, including Root Crops.	Miscellaneous Crops. Food.	Miscellaneous Crops. Non-Food.	Total Area Cropped.	*Deduct* Area Cropped more than once.	Net Area Cropped.
Bengal	657,800	357,900	199,600	29,217,800	4,552,800	24,665,000
Madras	1,148,339	19,040	151,232	39,052,377	4,734,400	34,317,977
Bombay .. Presidency	572,566	5,134	4,730	28,298,958	828,845	27,470,113
Bombay .. Sind ..	51,156	171	80,895	5,029,210	407,126	4,622,084
United Provinces Agra ..	370,244	92,016	8,386	634,183,195	6,788,836	27,394,359
United Provinces Oudh ..	154,309	2,202	585	12,413,934	3,053,820	9,360,114
Bihar and Orissa	732,100	501,600	282,800	31,762,300	5,871,900	25,890,400
Punjab	247,876	89,176	11,562	31,704,168	4,765,420	26,938,748
Burma .. Upper ..	679,701	1,534	4,468	5,813,436	590,925	5,222,511
Burma .. Lower ..	469,856	8,316	147,207	9,352,326	35,628	9,316,698
Central Provinces	94,576	1,951	795	20,902,658	2,531,343	18,371,315
Berar	14. 14	1,714	456	6,948,663	31,712	6,916,951
Assam	419.248	(*a*)	175,366	(*c*)6,410,648	526,455	5,881,193
North-West Frontier Province	25,685	41,028	968	2,875,438	412,715	2,462,723
Ajmer-Merwara	674	9,061	2,997	493,772	74,147	419,625
Delhi	5,829	143	330	339,027	121,041	217,986
Coorg	6,111	..	..	143,121	1,028	142,093
Manpur Pargana	8	(*a*)	21	7,682	497	7,185
Total ..	5,650,392	1,130,986	1,072,398	264,948,713	35,328,638	229,620,075

(*a*) Included under non-food crops.
(*b*) Includes 342.173 acres for which details are not available.
(*c*) „ 123,000 „ „ „ „

The following is a summary of the various **crop forecasts** relating to the season 1918-19 issued by the Department of Statistics, India up to August 1918:—

Crop.	Tracts comprised in the figures and percentage of total Indian crop represented by them.	Estimated Area.	Per cent. of preceding year (100= final figure of preceding year).	Estimated outturn.
		Acres.	Per cent.	
Sugarcane ..	U.P., Punjab, Bihar and Orissa, Bengal, Madras, Bombay and Sind,* Assam, N.W.F. Province and C. P. and Berar (99 per cent. of total sugarcane area of British India).	2,550,000	91·2	(*a*)
Sesamum ..	C. P. and Berar, Madras, Bombay and Sind,* Bengal, Bihar and Orissa, Punjab, Ajmer-Merwara (76 per cent. of the total sesamum area of British India).	1,162,000	26·8†	(*a*)
Cotton ..	All cotton-growing tracts except Sind, Guzarat, Karnatak and Baroda (75 per cent. of the total cotton area of India).	11,638,000	47†	(*a*)

* Including Native States.

† The percentages are 62 for sesamum and 88 for cotton, if compared with the estimates at the corresponding dates of last year.

(*a*) Not yet available.

Meteorology.

The meteorology of India like that of other countries is largely a result of its geographical position. The great land area of Asia to the northward and the enormous sea expanse of the Indian Ocean to the southward are the determining factors in settling its principal meteorological features. When the Northern Hemisphere is turned away from the sun, in the northern winter, Central Asia becomes an area of intense cold. The meteorological conditions of the temperate zone are pushed southward and we have over the northern provinces of India the westerly winds and eastward moving cyclonic storms of temperate regions, while, when the Northern Hemisphere is turned towards the sun, Southern Asia becomes a super-heated region drawing towards it an immense current of air which carries with it the enormous volume of water vapour which it has picked up in the course of its long passage over the wide expanse of the Indian Ocean, so that at one season of the year parts of India are deluged with rain and at another persistent dry weather prevails.

Monsoons.—The all-important fact in the meteorology of India is the alternation of the seasons known as the summer and winter monsoons. During the winter monsoon the winds are of continental origin and hence, dry, fine weather, clear skies, low humidity and little air movement are the characteristic features of this season. The summer rains cease in the provinces of the North-West Frontier Province and the Punjab about the middle of September after which cool westerly and northerly winds set in over that area and the weather becomes fresh and pleasant. These fine weather conditions extend slowly eastward and southward so that by the middle of October, they embrace all parts of the country except the southern half of the Peninsula, and by the end of the year have extended to the whole of the Indian land and sea area, the rains withdrawing to the Equatorial Belt. Thus the characteristics of the cold weather from October to February over India are:—Westerly winds of the temperate zone over the extreme north of India; to the south of these the north-east winds of the winter monsoon or perhaps more properly the north-east Trades and a gradually extending area of fine weather which, as the season progresses, finally embraces the whole Indian land and sea area. Two exceptions to these fine weather conditions exist during this period, *viz.*, the Madras coast and the north-west of India. In the former region the north-east winds which set in over the Bay of Bengal in October coalesce with the damp winds of the retreating summer monsoon, which current curves round over the Bay of Bengal, and, blowing directly on to the Madras coast gives to that region the wettest and most disturbed weather of the whole year, for while the total rainfall for the four months June to September, *i.e.*, the summer monsoon, at the Madras Observatory amounts to 15.36 inches the total rainfall for the three months October to December amounts to 29.48 inches. The other region in which the weather is unsettled, during this period of generally settled conditions, is North-west India. This region during January, February and part of March is traversed by a succession of shallow storms from the westward. The number and character of these storms vary very largely from year to year and in some years no storms at all are recorded. In normal years, however, in Northern India periods of fine weather alternate with periods of disturbed weather (occurring during the passage of these storms) and light to moderate and even heavy rain occurs. In the case of Peshawar the total rainfall for the four months, December to March, amounts to 5.26 inches while the total fall for the four months, June to September, is 4.78 inches, showing that the rainfall of the winter is, absolutely, greater in this region than that of the summer monsoon. These two periods of subsidiary "rains" are of the greatest economic importance. The fall in Madras is, as shown above, of considerable actual amount, while that of North-west India though small in absolute amount is of the greatest consequence as on it largely depend the grain and wheat crops of Northern India.

Spring Months.—March to May and part of June form a period of rapid continuous increase of temperature and decrease of barometric pressure throughout India. During this period there occurs a steady transference northward of the area of greatest heat. In March the maximum temperatures, slightly exceeding 100, occur in the Deccan; in April the area of maximum temperature, between 100° and 105°, lies over the south of the Central Provinces and Gujarat; in May maximum temperatures, varying between 105° and 110°, prevail over the greater part of the interior of the country while in June the highest mean maximum temperatures exceeding 110° occur in the Indus Valley near Jacobabad. Temperatures exceeding 120° have been recorded over a wide area including Sind, Rajputana; the West and South Punjab and the west of the United Provinces, but the highest temperature hitherto recorded is 126° registered at Jacobabad on June 12th, 1897. During this period of rising temperature and diminishing barometric pressure, great alterations take place in the air movements over India, including the disappearance of the north-east winds of the winter monsoon, and the air circulation over India and its adjacent seas, becomes a local circulation, characterised by strong hot winds down the river valleys of Northern India and increasing land and sea winds in the coast regions. These land and sea winds, as they become stronger and more extensive, initiate large contrasts of temperature and humidity which result in the production of violent local storms. These take the forms of dust storms in the dry plains of Northern India and of thunder and hailstorms in regions where there is inter-action between damp sea winds and dry winds from the interior. These storms are frequently accompanied with winds of excessive force, heavy hail and torrential rain and are on that account very destructive.

By the time the area of greatest heat has been established over North-west India, in the last week of May or first of June, India has become the seat of low barometric pressures relatively to the adjacent seas and the whole character of the weather changes. During

the hot weather period, discussed above, the winds and weather are mainly determined by local conditions. Between the Equator and Lat. 30° or 35° south the wind circulation is that of the south-east trades, that is to say from about Lat. 3°-35° south a wind from south-east blows over the surface of the sea up to about the equator. Here the air rises into the upper strata to flow back again at a considerable elevation to the Southern Tropic or beyond. To the north of this circulation, *i.e.*, between the Equator and Lat. 20° to 25° North, there exists a light unsteady circulation, the remains of the north-east trades, that is to say about Lat. 20° North there is a north-east wind which blows southward till it reaches the thermal equator where side by side with the south-east Trades mentioned above, the air rises into the upper strata of the atmosphere. Still further to the northward and in the immediate neighbourhood of land there are the circulations due to the land and sea breezes which are attributable to the difference in the heating effect of the sun's rays over land and sea. It is now necessary to trace the changes which occur and lead up to the establishment of the south-west monsoon period. The sun at this time is progressing slowly northward towards the northern Tropic. Hence the thermal equator is also progressing northward and with it the area of ascent of the south-east trades circulation. Thus the south-east trade winds cross the equator and advance further and further northward, as the thermal equator and area of ascent follows the sun in its northern progress. At the same time the temperature over India increases rapidly and barometric pressure diminishes, owing to the air rising and being transferred to neighbouring cooler regions—more especially the sea areas. Thus we have the southern Trades circulation extending northward and the local land and sea circulation extending southward until about the beginning of June the light unsteady interfering circulation over the Arabian Sea finally breaks up, the immense circulation of the south-east Trades, with its cool, moisture laden winds rushes forward, becomes linked on to the local circulation proceeding between the Indian land area and the adjacent seas and India is invaded by oceanic conditions—the **south-west monsoon** proper. This is the most important season of the year as upon it depends the prosperity of at least five-sixths of the people of India.

When this current is fully established a continuous air movement extends over the Indian Ocean, the Indian seas and the Indian land area from Lat. 30° S. to Lat. 30° N. the southern half being the south-east trades and the northern half the south-west monsoon. The most important fact about it is that it is a continuous horizontal air movement passing over an extensive oceanic area where steady evaporation is constantly in progress so that where the current enters the Indian seas and flows over the Indian land it is highly charged with aqueous vapours.

The Current enters the Indian seas quite at the commencement of June and in the course of the succeeding two weeks spreads over the Arabian Sea and Bay of Bengal up to their extreme northern limits. It advances ov India from these two seas. The Arabian s current blows on to the west coast and swee ing over the Western Ghats prevails more less exclusively over the Peninsula, Centr India, Rajputana and north Bombay. Th Bay of Bengal current blows directly up t Bay. One portion is directed towards Burm East Bengal and Assam while another portic curves to south at the head of the Bay a over Bengal, and then meeting with the barri of the Himalayas curves still further and blo as a south-easterly and easterly wind rig up the Gangetic plain. The south-west mo soon continues for three and a half to fo months, *viz.*, from the beginning of June the middle or end of September. During i prevalence more or less general though f from continuous rain prevails throughou India the principal features of the rainf distribution being as follows. The great portion of the Arabian Sea current, the tot volume of which is probably three times great as that of the Bengal current, blo directly on to the west coast district Here it meets an almost continuous hill range, forced into ascent and gives heavy rain alil to the coast districts and to the hilly rang the total averaging about 100 inches mo of which falls in four months. The curre after parting with most of its moisture advanc across the Peninsula giving occasional unce tain rain to the Deccan and passes out into t Bay where it coalesces with the local curren The northern portion of the current blowi across the Gujarat, Kathiawar and Sind coas gives a certain amount of rain to the coa districts and frequent showers to the Arava Hill range but very little to Western Rajputar and passing onward gives moderate to heav rain in the Eastern Punjab, Eastern Rajputa and the North-west Himalayas. In this regi the current meets and mixes with the monsoo current from the Bay.

The monsoon current over the southe half of the Bay of Bengal blows from sout west and is thus directed towards the Te asserim hills and up the valley of the Irrawa to which it gives very heavy to heavy rai That portion of this current which advanc sufficiently far northward to blow over Beng and Assam gives very heavy rain to the lo lying districts of East Bengal and immediate thereafter coming under the influence of t Assam Hills is forced upwards and gives e cessive rain (perhaps the heaviest in the worl to the southern face of these hills. The r maining portion of the Bay current advanc from the southward over Bengal, is then d flected westward by the barrier of the H malayas and gives general rain over the Ga getic plain and almost daily rain over the low ranges of the Himalayas from Sikhim to Kas mir.

To the south of this easterly wind of t Bay current and to the north of the wester wind of the Arabian Sea current there exis a debatable area running roughly from Hiss in the Punjab through Agra, Allahabad a part of Chota Nagpur to Orissa, where neith current of the monsoon prevails. In this ar the rainfall is uncertain and would probab

be light, but that the storms from the Bay of Bengal exhibit a marked tendency to advance along this track and to give it heavy falls of occasional rain.

The Total Rainfall of the monsoon period (June to September) is 100 inches over part of the west coast, the amount diminishes eastward, is below 20 inches over a large part of the centre and east of the Peninsula and is only 5 inches in South Madras: it is over 100 inches on the Tenasserim and South Burma coast and decreases to 20 inches in Upper Burma; it is over 100 in the north Assam Valley and diminishes steadily westward and is only 5 inches in the Indus Valley.

The month to month distribution for the whole of India is:—

May	.. ..	2·60 inches
June	.. ..	7·10 ,,
July	.. ..	11·25 ,,
August	.. ..	9·52 ,,
September	..	6·78 ,,
October	.. ..	3·15 ,,

Cyclonic storms and cyclones are an almost invariable feature of the monsoon period. In the Arabian Sea they ordinarily form at the commencement and end of the season, *viz.*, May and November, but in the Bay they form a constantly recurring feature of the monsoon season. The following gives the total number of storms recorded during the period 1877 to 1901 and shows the monthly distribution:—

	Jan.	Feb.	Mar.	Apl.	May	June
Bay of Bengal ..	..	..	1	4	13	28
	July	Aug.	Sep.	Oct.	Nov.	Dec.
Bay of Bengal	41	36	45	34	22	8
	Jan.	Feb.	Mar.	Apl.	May	June
Arabian Sea	..	..	..	2	15	
	July	Aug.	Sep.	Oct.	Nov.	Dec.
Arabian Sea	2 ..	1	1	5	..	

The preceding paragraphs give an account of the normal procession of the seasons throughout India during the year, but it must be remembered, that every year produces **variations from the normal**, and that in some years these variations are very large. This is more particularly the case with the discontinuous element rainfall. The most important variations in this element which may occur are:—

(1) Delay in the commencement of the rains over a large part of the country, this being most frequent in North Bombay and North-west India.

(2) A prolonged break in July or August or both.

(3) Early termination of the rains, which may occur in any part of the country.

(4) The determination throughout the monsoon period of more rain than usual to one part and less than usual to another part of the country. Examples of this occur every year.

About the middle of September fine and fresh weather begins to appear in the extreme north-west of India. This area of fine weather and dry winds extends eastward and southward, the area of rainy weather at the same time contracting till by the end of October the rainy area has retreated to Madras and the south of the Peninsula and by the end of December has disappeared from the Indian region, fine clear weather prevailing throughout. This procession with the numerous variations and modifications which are inseparable from meteorological conditions repeats itself year after year.

(*For monsoon of* 1918, *see page* 300).

Average Monthly and Annual Means of Air Temperature at Selected Stations in India.

Stations.	Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Mean.
		°	°	°	°	°	°	°	°	°	°	°	°	°
HILL STATIONS.														
*Shillong	4,920	49.5	51.8	60.4	65.2	66.6	68.8	70.0	69.2	68.4	63.1	56.5	50.7	61.7
Darjeeling	7,376	40.1	41.6	49.7	56.2	58.3	59.9	61.5	60.9	59.4	55.2	47.8	41.8	52.7
Simla	7,224	38.8	40.6	51.5	59.3	66.0	66.9	64.3	62.8	60.9	56.7	50.1	43.4	55.1
Murree	6,333	40.5	41.1	51.1	61.2	68.3	72.3	69.4	67.2	65.9	61.3	52.8	45.0	58.0
Srinagar	5,204	30.7	33.0	45.1	55.7	63.9	69.9	73.0	70.8	64.0	53.2	44.0	36.3	53.3
Mount Abu	3,945	58.2	61.0	69.9	78.0	79.8	74.9	69.8	67.6	69.6	71.6	65.2	59.9	68.8
*Ootacamund	7,327	54.0	55.5	58.6	61.5	61.3	58.2	56.9	57.4	57.3	57.2	55.4	54.3	57.3
*Kodaikanal	7,688	55.0	56.7	59.6	61.5	61.9	59.4	57.6	57.8	57.6	56.9	54.9	55.0	57.8
COAST STATIONS.														
Karachi	49	65.3	68.4	75.0	80.6	84.7	86.8	84.3	82.4	82.0	80.0	74.0	67.4	77.6
Veraval	18	69.4	70.2	74.0	79.1	81.5	82.5	80.0	79.1	79.0	79.5	77.2	72.3	77.0
Bombay	37	74.5	74.8	78.0	82.1	84.6	82.4	79.5	79.4	79.4	80.7	79.3	76.4	79.3
Ratnagiri	110	76.2	76.0	78.5	82.8	84.3	80.7	78.3	78.4	78.2	79.8	79.5	77.6	79.2
Mangalore	65	78.2	79.3	81.1	83.9	83.5	78.8	77.1	77.3	77.6	78.9	79.8	79.0	79.6
Calicut	27	77.8	79.8	81.6	83.6	83.1	78.5	76.7	77.4	78.3	79.1	79.5	78.3	75.9
Negapatam	31	75.5	77.4	80.5	84.8	87.7	87.0	85.6	84.4	83.4	80.9	78.3	76.0	81.8
Madras	22	75.3	76.6	79.5	84.1	88.7	88.4	85.7	84.5	83.9	80.8	77.9	75.7	81.8
Masulipatam	15	73.6	76.7	80.3	85.2	89.8	87.8	83.9	83.4	83.0	81.2	77.4	74.0	81.4
Gopalpur	21	70.0	74.8	78.3	81.6	84.1	83.7	81.8	82.0	82.2	79.6	74.3	69.8	78.6
Rangoon	57	74.7	77.3	81.2	85.0	82.2	79.5	78.8	78.7	79.1	80.0	78.3	75.6	79.2

* As the average mean figures for Shillong, Ootacamund and Kodaikanal are not available, means of normal maximum and minimum temperatures uncorrected for diurnal variation are given.

Average Monthly and Annual Means of Air Temperature at Selected Stations in India.

Stations.	Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Mean.
STATIONS ON THE PLAINS.		°	°	°	°	°	°	°	°	°	°	°	°	°
Toungoo	183	70.0	74.7	81.9	86.7	85.3	81.3	80.1	80.1	81.3	81.4	77.4	71.6	79.3
Mandalay	250	68.8	73.8	82.1	89.2	88.5	85.4	85.2	84.7	83.5	82.5	75.9	69.5	80.8
Silchar	104	63.8	67.0	73.9	78.0	80.1	81.4	82.6	82.4	81.7	79.7	73.1	66.1	75.9
Calcutta	21	65.2	70.3	79.3	85.0	85.7	84.5	83.0	82.4	82.6	80.0	72.4	65.3	77.9
Burdwan	99	65.7	70.0	80.4	86.7	86.5	84.9	83.6	82.8	83.1	80.7	73.0	66.3	78.6
Patna	183	60.8	65.3	76.9	86.2	88.0	86.4	83.5	83.1	83.3	79.5	70.1	62.2	77.1
Benares	267	60.0	65.3	76.6	86.8	91.3	89.4	84.1	83.1	83.0	77.9	67.8	60.2	77.2
Allahabad	309	59.5	64.9	76.8	87.6	92.5	90.8	84.5	83.2	83.0	77.6	67.5	59.8	77.3
Lucknow	368	58.7	63.7	75.2	86.4	90.6	90.2	85.3	83.4	83.2	77.1	66.3	58.9	76.6
Agra	555	60.1	64.8	76.7	88.1	94.0	93.4	86.0	84.2	84.2	79.4	68.7	61.2	78.4
Meerut	738	56.0	60.1	71.1	82.7	88.4	89.4	85.0	83.2	81.7	74.7	63.5	56.7	74.4
Delhi	718	57.9	62.2	74.1	86.2	91.7	92.2	86.4	84.5	83.9	78.5	67.6	59.6	77.1
Lahore	702	53.0	57.3	69.0	80.9	88.9	93.0	89.1	87.1	84.8	75.7	63.2	54.6	74.7
Multan	420	55.6	59.8	71.6	82.9	91.4	94.9	92.7	90.4	88.0	78.6	67.1	57.7	77.5
Jacobabad	186	57.3	62.4	74.5	85.5	94.4	97.7	95.0	91.6	88.8	79.2	67.5	58.9	79.3
Hyderabad (Sind)	96	63.6	67.1	77.6	86.2	91.6	91.7	88.6	86.0	86.0	82.7	73.4	65.0	79.9
Bikaner	771	59.2	63.6	76.6	88.4	94.1	94.7	90.4	87.3	87.4	82.4	70.5	61.4	79.6
Rajkote	429	66.8	70.0	77.4	85.1	89.2	87.5	81.7	80.6	80.8	80.4	74.1	68.4	78.5
Ahmedabad	163	70.3	74.0	82.7	91.2	92.9	89.4	83.7	83.0	83.5	84.3	78.3	72.9	82.1
PLATEAU STATIONS.														
Akola	930	68.5	73.7	81.9	90.1	93.3	86.2	80.6	78.9	79.7	77.9	71.7	66.8	79.2
Jubbulpore	1,327	61.8	66.8	76.5	86.3	91.9	85.7	79.0	78.0	79.0	74.8	66.6	60.3	75.6
Nagpore	1,025	68.8	74.3	82.4	90.6	94.5	86.6	80.4	79.4	80.4	78.4	72.2	67.1	79.6
Raipur	970	67.7	73.6	81.9	90.3	93.6	86.0	79.6	79.0	80.3	78.1	71.5	66.0	79.0
Ahmednagar	2,152	67.1	71.3	77.5	82.5	83.8	79.2	76.2	74.9	74.5	75.1	70.5	67.1	75.0
Poona	1,840	69.8	73.9	80.1	83.9	83.8	78.7	74.9	73.7	74.4	76.2	72.5	68.9	75.9
Sholapur	1,590	72.7	77.7	84.2	88.4	88.9	81.8	78.9	77.7	77.3	77.7	74.6	71.3	79.3
Belgaum	2,539	69.8	73.0	77.5	79.2	78.0	72.8	70.1	69.7	70.4	72.9	70.9	69.3	72.8
Hyderabad (Deccan)	1,690	70.4	77.1	83.1	88.0	90.1	82.6	77.9	77.1	77.4	76.8	72.3	69.1	78.5
Bangalore	3,021	67.5	72.0	76.7	79.9	78.5	74.0	72.0	71.8	71.8	71.8	69.6	67.5	72.8
Bellary	1,475	73.2	79.6	85.6	89.2	89.0	83.4	80.9	80.6	80.2	79.1	75.3	72.5	80.8

Average Monthly and Annual Rainfall at Selected Stations in India.

Stations.	Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Total.
HILL STATIONS.		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Shillong	4,920	0.49	0.81	1.85	4.29	10.06	16.46	13.48	12.79	14.75	6.23	0.98	0.25	82.44
Darjeeling	7,376	0.76	1.08	2.01	4.08	7.83	24.19	31.74	25.98	18.34	5.35	0.24	0.20	121.80
Simla	7,224	3.21	3.07	2.48	2.32	3.71	7.84	18.42	17.87	6.17	1.19	0.41	1.28	67.97
Murree	6,333	3.73	4.14	3.96	3.62	2.99	3.41	12.51	13.40	5.64	1.86	1.27	1.37	57.90
Srinagar	5,204	3.36	4.24	3.10	3.30	2.72	1.77	2.78	1 95	1.18	1.14	0.41	1.08	27.03
Mount Abu	3,945	0.27	0.31	0.15	0.08	0.97	5.59	22.05	21.51	9.58	1.46	0.28	0.24	62.49
Ootacamund	7,327	0.35	0.38	1.00	3.46	5.93	6.18	5.94	4.70	4.44	8.57	4.00	1.65	46.60
Kodaikanal	7,688	1.17	1.48	3.59	5.29	6.47	4.01	3.89	5.99	6.70	12.49	8.17	5.57	64.82
COAST STATIONS.														
Karachi	49	0.64	0.30	0.15	0.13	0.03	0.43	3.16	1.77	0.66	0.04	0.16	0.19	7.66
Veraval	18	0.01	0.03	0.00	0.00	0.02	5.31	8.92	7.27	2.40	0.81	0.66	0.10	25.53
Bombay	37	0.12	0.02	0.01	0.05	0.55	20.56	24.56	14.91	10.93	1.76	0.47	0.05	73.99
Ratnagiri	110	0.60	0.02	0.05	0.15	1.27	31.32	34.25	20.19	12.53	3.62	0.65	0.06	104.71
Mangalore	65	0.13	0.07	0.11	2.06	7.26	38.47	37.39	22.88	11.09	7.90	1.97	0.50	129.83
Calicut	27	0.17	0.16	0.79	3.70	9.04	36.46	29.36	14.89	7.39	9.12	3.80	1.32	116.20
Negapatam	31	1.15	0.72	0.32	1.02	1.81	1.30	1.74	3.29	3.55	10.08	15.02	11.23	51.23
Madras	22	0.83	0.28	0.37	0.65	1.96	2.06	3.80	4.66	4.84	10.93	13.30	5.25	48.93
Masulipatam	15	0.17	0.16	0.26	0.40	1.34	4.33	5.67	6.09	6.56	8.36	4.43	0.53	38.30
Gopalpur	21	0.23	0.43	0.56	0.73	2.01	5.76	6.11	7.20	6.86	9.84	3.50	0.72	43.95
Rangoon	57	0.11	0.23	0.16	1.74	11.73	18.30	21.37	19.65	15.89	7.12	2.52	0.07	98.89

Average Monthly and Annual Rainfall at Selected Stations in India.

Stations.	Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Total
STATIONS ON THE PLAINS.		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Toungoo	183	0.06	0.12	0.08	1.90	6.43	13.63	17.48	18.53	11.46	6.95	1.25	0.16	78.05
Mandalay	250	0.06	0.08	0 21	1.19	5.26	5.71	3.26	4.16	6.21	4.54	1.67	0.28	32.63
Silchar	101	0.64	2.32	7.93	13.56	15.72	20.39	19.98	18.69	13.95	6.40	1.31	0.54	121.43
Calcutta	21	0.29	1.02	1.14	1.54	5.60	11.04	12.31	12.69	10.40	3.87	0.62	0.31	60.83
Burdwan	99	0.38	0.89	1.24	2.20	5.56	10.17	12.32	11.49	8.59	3.93	0.64	0.13	57.54
Patna	183	0.72	0.53	0.35	0.30	1.70	7.76	11.41	10.72	7.82	2.89	0.20	0.14	44.54
Benares	267	0.74	0.51	0.33	0.15	0.56	5.45	12.54	11.19	6.54	2.24	0.17	0.17	40.59
Allahabad	309	0.82	0.48	0.38	0.14	0.29	5.09	12.24	10.88	6.32	2.40	0.25	0.23	39.52
Lucknow	368	0.90	0.45	0.32	0.11	0.91	5.34	11.39	11.32	6.61	1.33	0.08	0.44	39.20
Agra	555	0.55	0.33	0.25	0.16	0.64	2.84	9.67	7.11	4.41	0.39	0.06	0.29	26.70
Meerut	758	1.05	0.83	0.63	0.34	0.70	3.60	9.37	7.64	4.55	0.43	0.08	0.40	29.62
Delhi	718	1.02	0.61	0.67	0.35	0.71	3.18	8.38	7.44	4.42	0.39	0.10	0.43	27.70
Lahore	702	0.87	1.13	0.89	0.51	0.80	1.86	6.65	4.88	2.10	0.43	0.11	0.47	20.70
Multan	420	0.39	0.36	0.42	0.27	0.39	0.43	2.19	1.66	0.60	0.07	0.06	0.27	7.11
Jacobabad	186	0.28	0.27	0.25	0.17	0.15	0.10	1.18	1.25	0.19	0.01	0.10	0.15	4.10
Hyderabad (Sind)	96	0.24	0.22	0.10	0.07	0.11	0.41	2.61	2.77	0.54	0.00	0.10	0.05	7.22
Bikaner	771	0.38	0.24	0.18	0.14	0.84	1.65	3.29	3.14	1.08	0.09	0.06	0.18	11.27
Rajkote	429	0.05	0.10	0.01	0.01	0.31	5.21	10.89	6.41	3.75	0.67	0.33	0.06	27.80
Ahmedabad	163	0.02	0.10	0.01	0.03	0.46	3.94	11.49	8.26	4.42	0.55	0.19	0.05	29.52
PLATEAU STATIONS.														
Akola	930	0.45	0.18	0.43	0.16	0.31	5.12	8.74	6.48	6.24	2.14	0.44	0.53	31.27
Jubbulpore	1,527	0.72	0.52	0.48	0.22	0.47	8.53	18.82	15.13	8.38	1.55	0.37	0.26	55.45
Nagpore	1,025	0.58	0.42	0.57	0.46	0.68	8.44	13.49	9.79	8.11	2.14	0.51	0.45	45.62
Raipur	970	0.30	0.33	0.59	0.59	0.76	9.38	14.94	12.72	7.75	2.09	0.62	0.20	50.27
Ahmednagar	2,152	0.27	0.12	0.15	0.40	1.16	4.73	3.03	3.60	6.75	3.12	0.89	0.44	24.66
Poona	1,840	0.18	0.05	0.13	0.58	1.45	5.35	6.90	4.03	4.43	4.11	0.85	0.20	28.26
Sholapur	1,590	0.06	0.08	0.29	0.63	1.09	4.41	4.19	5.42	7.77	3.63	0.87	0.30	28.74
Belgaum	2,539	0.06	0.03	0.49	2.05	2.73	9.32	15.37	9.15	4.05	5.09	1.33	0.24	49.91
Hyderabad (Deccan)	1,690	0.05	0.12	0.67	0.73	0.78	4.44	6.22	6.76	7.10	2.98	1.53	0.17	31.55
Bangalore	3,021	0.06	0.22	0.72	1.19	4.53	3.13	4.13	6.00	7.11	6.74	2.61	0.39	36.83
Bellary	1,475	0.10	0.03	0.42	0.83	1.93	1.84	1.41	2.18	4.12	4.04	1.20	0.20	18.30

MONSOON OF 1918.

The monsoon of the year was as feeble as the monsoon of last year was markedly vigorous. The rainfall gathered on the plains of India as a whole was for the period June to October in defect by 8 7 or 21 per cent. This is the largest deficiency on record not excepting even that of 1899 when the defect was 6·5 or 17 per cent.

The abnormal features exceptional to the incidence of the year's monsoon were (1) its early onset in North-East India and the Peninsula. (2) The marked feebleness of the Arabian Sea current and its failure to extend into North-West India as against the pronounced vigour of the Bay current the onset of which was specially notable in Assam, Bengal and Bihar; and (3) the much too early recession of the SW current from a large portion of Northern India.

The Arabian Sea monsoon appeared on the Malabar Coast on May 10th about three weeks before the normal date. It rapidly extended Northwards and gave during the month wide spread and heavy rain over nearly the whole of the Peninsula. Its initial onset however suffered a sudden check and the current becoming extremely feeble remained weak from the beginning of June to about the middle of August, practically throughout the period during which the activity of the monsoon current is usually most pronounced. Advent of a fresh pulse made an appreciable improvement in the conditions during the latter half of August, but the effects were transitory and a complete break supervened thereafter which at first affected the Punjab but rapidly extending eastwards and southwards it embraced practically the whole of Northern and Central India by the end of September. The early recession besides seriously influenced the October precipitation over the whole of India with the exception of Bay Islands and Upper Burma. The heavy deficiency of 59 per cent. is a record for the month

The Bay current brought the monsoon rains to Bengal on the 27th May about two weeks earlier than the usual date. It remained active and was decidedly stronger than usual in June and August, became appreciably feeble in July and markedly so in October. It was about normal in September.

A marked feature of the season was the absence of any heavy and well developed cyclonic storms. A few which were noted were mostly either poorly developed or short lived disturbances and did not influence or intensify the S W current or beneficially affect the precipitation over the sorely stricken areas. Of these, three need a passing reference. The first storm of the season which arose in the Bay on the 20th May crossed the Coast on the 25th and giving heavy rain on the Arakan and Chittagong coasts hastened the advance of the monsoon in Bengal. A small disturbance starting from Bihar gave much needed precipitation to Gujarat and Rajputana about the last week in August. A third short lived disturbance starting from the Bay advanced into Bihar and gave 20·25 of rain to Patna between the 6th and 8th September.

The total fall for the whole period June to October was in excess by 25 per cent. in Assam and Bengal; About normal in Burma, Bihar and Orissa, and in defect over the rest of the whole of India. In Sind the defect was as much as 92 per cent. while the defect elsewhere varied from 40 to 60 per cent., the Central Provinces only showing a defect of 27 per cent.

The following table gives details of the rainfall for the period:—

Division.	Rainfall June to October 1918.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal
	Inches.	Inches.	Inches.	per cent.
Burma	90.5	92.1	—1.6	—2
Assam	81.8	65.3	+16.5	+25
Bengal	80.8	64.6	+16.2	+25
Bihar and Orissa	47.1	48.6	—1.5	—3
United Provinces	22.5	37.5	—15.0	—40
Punjab	8.0	15.7	—7.7	—49
N. W. Frontier Province	2.0	5.0	—3.0	—60
Sind	0.4	4.8	—4.4	—92
Rajputana	7.5	17.7	—10.2	—58
Bombay	17.8	40.5	—22.7	—56
Central India	18.5	34.5	—16.0	—46
Central Provinces	31.2	42.7	—11.5	—27
Hyderabad	13.7	29.1	—15.4	—53
Mysore	10.7	21.2	—10.5	—50
Madras	17.9	34.6	—16.7	—48
Mean of India	32.4	41.1	—8.7	—21

The Textile Industry.

India has been the home of the cotton trade from the earliest times. Its cotton, known as white wool, was well known to the ancients, and its cloth was familiar to the West in the days of the overland route. The name Calico comes from the fine woven goods of Calicut, and the products of the Dacca handlooms are still remarkable as the finest muslins human skill can produce.

Indian Cotton.

The exports of Indian cotton began to assume importance with the opening of the sea route. They received an immense stimulus during the American Civil War, when the close blockade of the Confederate ports produced a cotton famine in Lancashire, and threw the English spinners back on India for their supply of raw material. When the war broke out the shipments of Indian cotton were 528,000 bales, but during the last years of the war they averaged 973,000 bales. Most of this cotton was sold at an enormously inflated price, and induced a flow of wealth into Bombay, the great centre of the trade, for which there was no outlet. The consequence was an unprecedented outburst of speculation known as the "Share Mania," and when the surrender of Lee re-opened the Southern Ports widespread ruin followed. It is estimated that the surplus wealth brought into the country by the American Civil War aggregated £92 millions. Since then the cultivation of Indian cotton, although interrupted by famine, has steadily increased. For the last season for which returns are available, 1917-18, the total area in all the territories reported on was computed at 24,781,000 acres which marked a net increase of 3,036,000 acres or 14 per cent. on the 21,745,000 acres (revised figure) of the previous year. The total estimated outturn was 4,036,000 bales of 400 lbs. as against 4,502,000 bales for previous year, representing a decrease of 10 per cent. To this figure may be added some 1,000 bales estimated as the production in Native States in Bihar and Orissa which make no return.

Bombay, the Central Provinces and Hyderabad are the **chief producing centres.** The following table gives the rough distribution of the outturn. The figures are the estimated figures for the past season, and are not exact, but they indicate the distribution of the crop :—

	Area (acres).	Yield (bales).
Bombay (*a*)	7,312,000	1,331,000
Central Provinces & Berar	4,582,000	591,000
Madras (*a*)	2,592,000	569,000
Punjab (*a*)	1,799,000	271,000
United Provinces (*a*) ..	1,316,000	198,000
Sind (*a*)	245,000	67,000
Burma	246,000	54,000
Bihar and Orissa (*b*) ..	69,000	17,000
Bengal (*a*)	71,000	19,000
North-West Frontier Province	38,000	10,000
Assam	32,000	12,000
Ajmere-Merwara	70,000	14,000
Hyderabad	3,451,000	450,000
Central India	1,454,000	116,000
Baroda	915,000	240,000
Rajputana	435,000	54,000
Mysore	154,000	23,000

(*a*) Including Native States.

(*b*) Excluding Native States, for which the yield is roughly estimated at about 1,000 bales.

The distribution of the export trade is indicated in the appended table.

Exports of cotton.—A portion of the Indian crop of the season 1916-17 and a portion of the crop of the season 1917-18 came into statistical consideration in the exports during the year 1917-18. The exports amounted to 6½ million cwts. valued at Rs. 36 crores against 8½ million cwts. valued at Rs.34 crores in 1916-17. This represents 48·18 per cent. of the total value of raw materials exported from India and 16·33 per cent. of the total exports. The exports showed a decrease of nearly 22·60 per cent. in quantity and an increase of 6·21 per cent. in value. The average declared value per unit rose from Rs. 40 to 55 per cent. or by 37·5 per cent. on a total increase of Rs. 2 crores. The distribution of the trade is shown below. The United Kingdom and Japan had larger receipts during the war period as compared with those in the earlier period. The principal purchasers of cotton other than Japan are in normal years Germany, Belgium, Italy, Austria-Hungary and France.

	Exports of Raw Cotton.		
	1915-16.	1916-17.	1917-18.
	Cwts.	Cwts.	Cwts.
U. Kingdom ..	833,628	801,132	
Germany ..	....	....	
Belgium ..	....	....	
France ..	205,457	264,940	
Spain ..	239,025	254,677	
Italy ..	1,124,106	966,391	
Austria-Hungary ..	....	....	*
China and Hongkong ..	381,435	336,341	6,582,860
Japan ..	5,917,663	5,791,289	
Other Countries ..	152,653	91,226	
Total ..	8,853,967	8,505,996	

Bombay is the great centre of the cotton trade. The **principal varieties** are Dholleras, Broach, Oomras (from the Berars), Dharwar and Coomptas. Broach is the best cotton grown in Western India. Hinganghat cotton; from the Central Provinces, has a good reputation. Bengals is the name given to the cotton of the Gangetic valley, and generally to the cottons of Northern India. The Madras cottons are known as Westerns, Coconadas, Coimbatores and Tinnevellys. The best of these is Tinnevelly. Cambodia cotton has been grown with success in Southern India,

* Details for each country see "Trade."

but it shows a tendency to revert. The high prices of cotton realised of recent years have given a great impetus to cultivation. Government have also been active in improving the class of cotton produced, by seed selection, hybridization and the importation of exotic cottons. Although these measures have met with a considerable measure of success, they have not proceeded far enough to leaven the whole outturn, which still consists for the most part of a short-staple early maturing variety, suitable to soils where the rainy season is brief.

Reference has been made to the popularity of the Indian handloom cloths in the earliest days of which we have record. This trade grew so large that it excited alarm in England; and it was killed by a series of enactments, commencing in 1701, prohibiting the use or sale of Indian calicoes in England. The invention of the spinning jenny and the power loom and their development in England converted India from an exporting into an importing country, and made her dependent on the United Kingdom for the bulk of her piece-goods The first attempt to establish a cotton mill in India was in 1838, but the foundations of the industry were really laid by the opening of the first mill in Bombay in 1856. Thereafter, with occasional set backs from famine, plague and other causes, its progress was rapid.

The following statement shows the quantity (in pounds) of yarn of all counts spun in all India for the twelve months, April to March, in each of the past three years:—

	1915-16.	1916-17.	1917-18.
BRITISH INDIA.			
Bombay	509,770,810	482,147,956	468,972,125
Madras	44,303,310	44,187,107	43,092,929
Bengal	32,096,459	28,568,029	32,881,683
United Provinces	48,444,669	46,177,251	39,473,169
Ajmer-Merwara	3,554,452	2,576,103	1,816,864
Punjab	4,739,520	3,749,852	3,909,431
Delhi	2,802,305	2,702,886	3,187,993
Central Provinces and Berar	37,413,174	34,337,717	33,466,316
TOTAL ..	683,154,699	644,446,901	626,800,510
FOREIGN TERRITORY.			
Native States of Indore, Mysore, Baroda, Nandgaon, Bhavnagar, Hyderabad, Wadhwan, Gwalior (Ujjain) and Pondicherry (*a*)..	39,269,880	36,660,330	33,775,105
GRAND TOTAL ..	722,424,579	681,107,231	660,575,615

(*a*) Including the production of one mill only.

The spinning of yarn is in a large degree centred in Bombay, the mills of that province producing nearly 74 per cent. of the quantity produced in British India. The United Provinces of Agra and Oudh and Madras produced about 6 per cent. and 7 per cent respectively, while Bengal and the Central Provinces produced 5·1 and 5·2 per cent. Elsewhere the production is as yet very limited.

BOMBAY SPINNERS.

Here is a detailed statement of the quantity (in pounds) and the counts, or numbers, of yarn spun in Bombay island :—

——	1915-16.	1916-17.	1917-18.
Nos. 1 to10	97,875,248	73,500,246	71,167,206
,, 11—20	197,320,321	198,699,909	186,336,410
,, 21—30	77,107,994	77,591,278	90,915,609
,, 31—40	3,831,691	4,824,359	6,991,059
Above 40	557,233	1,225,775	1,846,887
Wastes, &c.	50,314	57,928	31,467
TOTAL ..	376,742,801	355,899,495	357,288,638

YARN AT AHMEDABAD.

The corresponding figures for Ahmedabad are as follows :—

——	1915-16.	1916-17.	1917-18.
Nos. 1—10	3,146,878	1,648,677	974,314
,, 11—20	24,438,529	17,997,730	14,834,912
,, 21—30	44,701,403	45,764,637	36,038,418
,, 31—40	10,546,467	14,178,018	12,008,343
Above 40	83,339	675,588	1,009,719
Wastes, &c.	4,052	4,399	.....
TOTAL ..	82,920,668	80,269,049	64,865,706

YARN SPUN THROUGHOUT INDIA.

The grand totals of the quantities in various counts of yarn spun in the whole of India, including Native States, are given in the following table :—

——	1915-16.	1916-17.	1917-18.
Nos. 1—10	145,306,797	110,682,164	100,452,492
,, 11—20	386,187,603	369,932,533	346,001,810
,, 21—30	169,743,636	171,487,582	183,667,136
,, 31—40	18,572,994	24,081,681	24,388,708
Above 40	1,962,987	4,577,334	5,842,190
Wastes, &c.	650,562	345,937	223,279
TOTAL ..	722,424,579	681,107,231	660,575,615

In the early days of the textile industry the energies of the millowners were largely concentrated on the production of yarn, both for the China market, and for the handlooms of India. The increasing competition of Japan in the China market, the growth of an indigenous industry in China and the uncertainties introduced by the fluctuations in the China exchanges consequent on variations in the price of silver compelled the millowners to cultivate the Home market. The general tendency of recent years has been to spin higher counts of yarn, importing American cotton for this purpose to supplement the Indian supply, to erect more looms, and to produce more dyed and bleached goods. This practice has reached a higher development in Bombay than in other parts of India, and the Bombay Presidency produces nearly 87 per cent. of the cloth woven in India. The United Provinces produces 2·4 per cent., the Central Provinces 3·8 per cent. and Madras about 2·5 per cent. Grey and Bleached goods represent nearly 70 per cent. of the whole production.

Analysis of Woven Goods.

The following brief extract is taken from the statement of the quantity (in pounds and their equivalent in yards) and description of woven goods produced in all India, including Native States :—

——	1915–16.	1916–17.	1917–18.
Grey and Bleached piece-goods—			
Pounds	267,165,288	274,851,443	268,772,199
Yards	1,094,867,131	1,136,170,373	1,141,021,562
Coloured piece-goods—			
Pounds	81,603,755	98,351,965	106,751,853
Yards	346,647,419	441,962,416	473,104,896
Grey and coloured goods other than piece-goods—			
Pounds	2,540,552	3,113,286	3,639,423
Dozens	653,343	660,384	706,251
Hosiery—			
Pounds	356,077	409,790	349,373
Dozens	220,754	256,576	215,221
Miscellaneous—			
Pounds	588,883	959,679	1,638,317
Cotton goods mixed with silk or wool—			
Pounds	.....	42,653	253,004
Total—			
Pounds	352,254,555	377,728,816	381,404,169
Yards	1,441,514,550	1,578,132,789	1,614,126,458
Dozens	874,097	896,960	921,472

Bombay Woven Goods.

The output of woven goods during the three years in the Bombay Presidency was as follows. (The weight in pounds represents the weight of all woven goods ; the measure in yards represents the equivalent of the weight of the grey and coloured piece-goods.)

——	1915–16.	1916–17.	1917–18.
Pounds	287,487,309	305,178,667	309,110,604
Yards	1,201,489,745	1,318,810,176	1,361,080,711
Dozens	675,189	731,539	761,503

The grand totals for all India are as follows :—

——	1915–16.	1916–17.	1917–18.
Pounds	352,254,555	377,728,816	381,404,169
Yards	1,441,514,550	1,578,132,789	1,614,126,458
Dozens	874,097	896,960	921,472

Progress of the Mill Industry.

The following statement shows the progress of the Mill Industry in the whole of India.

Year ending 30th June	Number of Mills.	Number of Spindles.	Number of Looms.	Average No. of Hands Employed Daily.	Approximate Quantity of Cotton Consumed.	
					Cwts.	Bales of 392 lbs
1898	185	4,259,720	38,013	148,964	5,184,648	1,481,328
1899	188	4,728,333	39,069	162,108	5,863,165	1,675,190
1900	193	4,945,783	40,124	161,189	5,086,732	1,453,352
1901	193	5,006,936	41,180	172,883	4,731,090	1,351,740
1902	192	5,006,965	42,584	181,031	6,177,633	1,765,038
1903	192	5,043,297	44,092	181,399	6,087,690	1,739,340
1904	191	5,118,121	45,337	184,779	6,106,681	1,744,766
1905	197	5,163,486	50,139	195,277	6,577,354	1,879,244
1906	217	5,279,595	52,668	208,616	7,082,306	2,023,516
1907	224	5,333,275	58,436	205,696	6,930,595	1,980,170
1908	241	5,756,020	67,920	221,195	6,970,250	1,991,500
1909	259	6,053,231	76,898	236,924	7,381,500	2,109,000
1910	263	6,195,671	82,725	233,624	6,772,535	1,935,010
1911	263	6,357,460	85,352	230,649	6,670,531	1,905,866
1912	268	6,463,929	88,951	243,637	7,175,357	2,050,102
1913	272	6,596,862	94,136	253,786	7,336,056	2,096,016
1914*	271	6,778,895	104,179	260,276	7,500,961	2,143,126
1915*	272	6,848,744	108,009	265,346	7,359,212	2,102,632
1916*	266	6,839,877	110,268	274,361	7,692,013	2,197,718
1917*	263	6,738,697	114,621	276,771	7,693,574	2,198,164

* Year ending 31st August.

Earnings of Labour.

In 1917 wages in the Bombay cotton industry were increased by ten per cent. to meet the higher cost of food. They were raised a further ten per cent. in 1919. We give the average wages, it being understood that the Bombay rate is at least ten per cent. higher.

AVERAGE WAGES.

Cotton.	Rate per	1915.	1916.	1917.
		Rs. a. p.	Rs. a. p.	Rs. a. p.
Card Room	Month	12 13 0	12 13 7	13 2 9
Ring-throstle Room	,,	12 6 8	12 6 8	12 12 0
Reeling Room	,,	9 8 0	9 8 0	10 8 0
Bundling Room	,,	16 0 0	16 0 0	17 0 0
Sizing Department	,,	23 6 10	23 6 10	23 6 10
Weaving Department	,,	33 8 0	36 0 0	36 0 0

Statement of the amount in rupees of Excise duty realised from goods woven in th Cotton Mills in British India; under the Cotton Duties Act, II of 1896; also the amount o equivalent duty levied in the Native States; in each year from 1896-97 to 1917-18.

	Bombay.	Madras.	Bengal.	United Provinces of Agra and Oudh (also Ajmer-Merwara).	Punjab and Delhi.	Central Provinces and Berar
1897–98	9,60,60	66,470	1,180	44,350	14,460	79,26
1898–99	11,26,390	89,130	900	61,000	12,730	84,96
1899–1900	10,95,236	88,678	2,523	54,818	10,448	88,10
1900–01	10,28,542	41,827	5,038	50,116	5,806	84,97
1901–02	15,26,103	54,139	5,863	69,284	4,379	1,10,14
1902–03	15,84,121	67,813	6,605	74,023	3,031	1,30,62
1903–04	17,64,527	62,350	10,908	89,189	1,104	1,56,37
1904–05	20,43,832	65,379	11,929	96,710	2,607	1,61,36
1905–06	22,78,425	1,10,943	11,165	1,32,364	5,144	1,68,74
1906–07	24,36,265	1,32,693	23,709	1,35,884	7,464	1,64,68
1907–08	28,82,296	1,35,131	31,556	1,66,044	8,746	1,75,94
1908–09	29,51,859	1,42,295	53,351	1,88,345	9,509	1,98,41
1909–10	33,88,658	1,45,333	55,822	1,92,552	6,611	2,17,21
1910–11	36,78,552	1,48,136	56,359	1,82,083	7,300	2,07,81
1911–12	42,17,878	1,65,048	48,631	1,84,653	10,862	2,52,41
1912–13	48,27,698	2,06,862	81,709	2,11,847	17,971	2,71,88
1913–14	45,68,188	2,13,166	78,951	2,55,467	22,353	3,00,91
1914–15	42,31,546	1,83,880	53,046	2,07,454	10,068	2,54,93
1915–16	42,25,608	2,11,456	41,704	2,01,012	9,291	2,36,49
1916–17	35,38,236	2,87,043	70,529	2,47,991	24,183	2,93,46
1917–18	65,80,265	4,09,467	1,18,336	2,91,052	38,628	3,49,48

	Total British India.		Native States.	Grand Total.	
	Gross duty.	Net duty.	Gross duty.	Gross duty.	Net duty.
1897–98	11,66,329	11,38,950	47,835	12,14,164	11,86,785
1898–99	13,75,119	13,53,120	52,186	14,27,305	14,05,306
1899–1900	13,39,812	13,09,514	40,937	13,80,749	13,50,451
1900–01	12,16,307	11,62,947	48,449	12,64,756	12,11,396
1901–02	17,69,908	17,16,836	61,171	18,31,079	17,77,965
1902–03	18,66,213	18,25,469	65,541	19,31,754	18,91,010
1903–04	20,77,449	20,36,104	59,031	21,36,510	20,95,149
1904–05	23,81,825	23,33,636	67,320	24,49,145	24,06,976
1905–06	27,06,784	26,71,061	83,455	27,90,239	27,54,516
1906–07	29 00.957	28,64,202	81.976	29,82.671	29,46,152
1907–08	33,99,717	33,55,946	97,499	34,97,216	34,53,443
1908–09	35,43,778	34,98,480	1,14,498	36,58,276	36,12,977
1909–10	40,06,193	39,61,020	1,37,699	41,43,892	40,98,719
1910–11	42,26,575	1,75,878	1,75,878	44,56,129	44,01,707
1911–12	48,79,478	48,04,492	1,82,479	50,61,957	49,86,971
1912–13	56,17,969	55,76,567	2,21,178	58,39,147	57,97,745
1913–14	54,39,043	53,95,014	2,38,393	56,77,436	56,33,407
1914–15	49,40 931	49,32,185	2,33,160	51,74,091	51,65,345
1915–16	49,25,571	48,40,107	1,90,275	51,15,846	50,30,382
1916–17	44,61,448	43,80,125	2,47,301	47,08,749	46,27,726
1917–18	77,87,237	75,99,355	3,96,856	81,84,093	79,96,211

The Jute Industry.

Considering its present dimensions, the jute ndustry of Bengal is of very recent origin. The first jute mill in Bengal was started at Rishra in 1855, and the first power-loom was ntroduced in 1859. The original outturn vas 8 tons per day. In 1909 it had grown to 2,500 tons per day, it is now 3,000 tons er day. and it shows every indication f growing and expanding year by year. nother interesting thing about the jute industry of Bengal is that, although it is practically a monopoly of Scotsmen from Dundee, he industry itself owes its inception to an Englishman. The founder of the industry vas George Acland, an Englishman, who began fe as a midshipman in the navy, and was or some years in the East India Marine Service. He quitted this service while still a young an, and engaged in commercial pursuits Ceylon, where he was successful. Later n he turned his attention to Bengal, and rriving in Calcutta about 1853 he got into ouch with the management of the paper orks, then at Serampore, where experiments ere being tried with country grasses and fibre lants to improve the quality or cheapen the anufacture of paper. This seems to have ggested to Acland the manufacture of rhea, nd in 1854 he proceeded to England, with a iew to obtaining machinery and capital in rder to manufacture goods from that material. uring this trip he visited Dundee, and while here Mr. John Kerr, of Douglas Foundry, ggested to him the importing of machinery to Bengal "where the jute comes from and in it there." This suggestion bore fruit, r shortly afterwards Acland placed orders ith Kerr for a few systems of preparing and inning machinery, and returned to India he same year accompanied by his two sons nd a few Dundee mechanics who were to asst him in erecting and operating the first ute mill in Bengal. This, as has been stated, as at Rishra, the site of the present Wellingn mills, near Serampore, and here, in 1855, he first machine spun jute yarns were made. s not infrequently happens the pioneer got ery little out of his venture. After several ps and downs the Acland interest in the ishra mill ceased in 1867, and the company hich Acland had formed in 1854 was wound p in 1868.

Power-looms.—The pioneer's example was llowed by Mr. George Henderson of that & and firm, and in 1859 the Borneo Jute Co. as launched under his auspices. To this mpany is due the credit of introducing the ower-loom for jute cloth. Unhampered by e financial difficulties which had burdened e Aclands, the Borneo Jute Co. made rapid rogress, doubling their works in 1864, and earing their capital twice over. In 1872 e mills were turned into a limited liability mpany, the present "Barnagore Jute Manufacturing Co., Ld." Four other mills followed succession—Gouripore, Serajgunge, and dia Jute Mills.

"From 1868 to 1873," writes Mr. David allace in "The Romance of Jute," "the e mills excepting the Rishra mill simply coined money and brought the total of their looms up to 1,250." To illustrate the prosperity of the industry at this period we may take the dividends paid by the Barnagore Company. On the working of their first half year, a 15 per cent. interim dividend was declared, which seemed to justify the enormous capital at which the company was taken over from the Borneo Company, and shares touched 68 per cent. premium. The dividend for the first year, ending August 1873, was 25 per cent., for 1874, 20 per cent., and for 1875 10 per cent. Then came a change. The investing public had forgotten the effect of the Port Canning bubble, and the condition of the jute industry in 1872-73 seeming to offer a better return than coal or tea, both of which had just enjoyed a boom, it was only necessary to issue a prospectus of a jute mill to have all the shares snapped up in the course of an afternoon.

In 1872–73 three new companies were floated locally—the Fort Gloster, Budge Budge and Sibpore, and two Home companies, the Champdany and Samnugger, all of which commenced operations in 1874. In 1874–5 eight other mills were launched—the Howrah, Oriental (now Union), Asiatic (now Soorah), Clive, Bengal Pressing and Manufacturing Co. (now the Belliaghatta-Barnagore branch mill), Rustomjee (now the Central), Ganges (registered in England), and Hastings, owned by Messrs. Birkmyre Bros., of Greenock fame—in all thirteen new companies, coming on all of a heap and swelling the total looms from 1,250 up to 3,500. This was too much of a strain for the new industry, and for the next ten years all the mills had a severe struggle. The older ones all survived the ordeal, but four of the new concerns—the Oriental, the Asiatic, the Bengal Pressing and Manufacturing Co. and the Rustomjee—became moribund, to appear again later on under new names and management. Fort Gloster also suffered badly.

Between 1875 and 1882 only one new mill was put up. This was Kamarhatty, promoted by Messrs. Jardine, Skinner & Co., which came into being in 1877, as the result of Dr. Barry's visit to Calcutta in 1876, when he transferred the agency of the Gouripore Co. from Messrs. Jardine, Skinner & Co. to his own firm. This mill, together with additions made by some of the other mills, brought the total looms up to 5,150 in 1882. By the end of 1885 the total was further augmented by the Hooghly, Titaghur, Victoria and Kankinarrah mills, bringing the number of looms at work up to 6,700. From this period on to 1894 no new mills came into existence except the Calcutta Twist Mill, with 2,400 spindles, since merged into the Wellington branch of the Champdany Co. Between 1896 and 1900 the following new mills were started:—the Gordon Twist Mill with 1,800 spindles (now acquired by Anglo-India), Khardah, Gondolpara (French owned), Alliance, Araihoon, Anglo-India, Standard, National, Delta (which absorbed the Serajgunge), and the Kinnison. A lull of four years witnessed large extensions to the existing mills, after which came the following series of new

mills, besides further heavy extensions—Dalhousie, Alexandra, Naihati, Lawrence, Reliance, Belvedere, Auckland, Kelvin and Northbrook.

Progress of the Industry.

THE record of the jute industry may well be said to be one of uninterrupted progress. The following statement shews **quinquennial averages from the earliest year for which complete information is available with actuals for the last three years**; and the figures in brackets represent the variations for each period, taking the average of the quinquennium from 1879-80 to 1883-84 as 100. It will be seen that the number of looms and spindles in operation and that of persons employed have increased to a very much larger extent than either the number of mills at work or the amount of capital employed :—

	Number of mills at work.	Authorised Capital (in lakhs of Rs.)	Number (in thousands) of		
			Persons employed.	Looms.	Spindles.
1879-80 to 1883-84 ..	21 (100)	270·7 (100)	38·8 (100)	5·5 (100)	88 (100)
1884-85 to 1888-89 ..	24 (114)	341·6 (126)	52·7 (136)	7 (127)	138·4 (157)
1889-90 to 1893-94 ..	26 (124)	402·6 (149)	64·3 (166)	8·3 (151)	172·6 (196)
1894-95 to 1898-99 ..	31 (148)	522·1 (193)	86·7 (223)	11·7 (213)	244·8 (278)
1899-1900 to 1903-04 ..	36 (171)	680 (251)	114·2 (294)	16·2 (295)	334·6 (380)
1904-05 to 1908-09 ..	46 (219)	960 (355)	165 (425)	24·8 (451)	510·5 (580)
1909-10 to 1913-14 ..	60 (286)	1,209 (443)	208·4 (537)	33·5 (609)	691·8 (786)
1914-15	70 (333)	1,394·3 (515)	238·3 (614)	38·4 (698)	795·5 (904)
1915-16	70 (333)	1,322·6 (488)	254·1 (655)	39·9 (725)	812·4 (923)
1916-17	74 (352)	1,395·5 (516)	262·6 (677)	39·7 (722)	824·3 (937)

The production of the mills has increased to a still greater extent. The following figures shew the exports of jute manufactures and the declared values for the same periods. The combined value of gunny bags and gunny-cloth exported by sea in 1916-17 is over thirty-three times as great as the average value of the exports in the period 1879-80 to 1883-84 :—

	Jute manufactures.		Value in lakhs of Rs.
	Gunny bags in millions of number.	Gunny cloths in millions of yards.	
1879-80 to 1883-84	54·9 (100)	4·4 (100)	124·9 (100)
1884-85 to 1888-89	77 (140)	15·4 (350)	162·9 (130)
1889-90 to 1893-94	111·5 (203)	41 (932)	289·3 (232)
1894-95 to 1898-99	171·2 (312)	182 (4,136)	518 (415)
1899-1900 to 1903-04	206·5 (376)	427·2 (9,709)	826·5 (662)
1904-05 to 1908-09	257·8 (469)	698 (15,864)	1,442·7 (1,154)
1909-10 to 1913-14	339·1 (618)	970 (2,045)	2,024·8 (1,621)
1914-15	397·6 (724)	1,057·3 (24,030)	2,582 (2,067)
1915-16	794·1 (1447)	1,192·3 (27,098)	3,797·8 (3,041)
1916-17	805 (1,466)	1,230·1 (27,957)	4,165·5 (3,335)

Up to the last quinquennium the **exports of raw jute** were marked by increases from year to year though the improvement was not so rapid as in the case of manufactures. A slight decrease in the exports occurred in 1909-10 as compared with the figures for the preceding quinquennial period and a further decline in 1910-11, but a marked recovery was made in 1911-12 which was accentuated in 1912-13 :—

	Jute, raw, in millions of cwt.	
1879-80 to 1883-84	7·5	(100)
1884-85 to 1888-89	8·9	(119)
1889-90 to 1893-94	10	(133)
1894-95 to 1898-99	12·3	(164)
1899-1900 to 1903-04 ..	12·7	(169)
1904-05 to 1908-09	15·09	(201)
1909-10..	14·6	(195)
1910-11..	12·7	(169)
1911-12..	16·2	(216)
1912-13..	17·5	(233)
1913-14..	15·4	(205)
1914-15..	10·1	(135)
1915-16..	12	(160)
1916-17..	10·8	(144)

The total quantity of jute manufactures exported by sea from Calcutta during the official year ending 31st March 1918 was 716,000 tons as against 784,800 tons in the preceding year 1916-17 and 603,500 tons in the pre-war year 1913-14. In 1917-18 gunny bags contributed 404,000 tons and gunnycloth 307,000 tons as against 461,800 tons and 317,800 tons, respectively in the preceding year (1916-17) and 324,300 tons and 275,100 tons respectively in the pre-war year (1913-14) The total value of jute manufactures exported during the year 1917-18 was £28 millions as against £27 millions in the preceding year and £19 millions in the pre-war year (1913-14).

The price of raw jute reached a very high point in 1906-07, the rate being Rs. 65 per bale; in 1907-08 it dropped to Rs. 42 per bale, and the fall was accentuated in 1908-09 and 1909-10, the price having declined to 36·4 and Rs. 31 per bale respectively. In 1910-11 the price rose again to Rs. 41-8-0, to Rs. 51-4-0 in 1911-12 and further to Rs. 76-12-0 in 1913-14. The following are the quinquennial average prices per bale (400 pounds) of ordinary jute calculated from the prices current published by the Bengal Chamber of Commerce :

	Price of jute, ordinary, per bale of 400 lbs.			
	Rs.	a.	p.	
1879-80 to 1883-84	23	8	0	(100)
1884-85 to 1888-89	23	3	2	(99)
1889-90 to 1893-94	32	6	5	(138)
1894-95 to 1898-99	30	12	0	(131)
1899-1900 to 1903-04 ..	32	1	7	(137)
1904-05 to 1908-09	44	13	6	(191)
1909-10..	31	0	0	(132)
1910-11..	41	8	0	(177)
1911-12..	51	4	0	(218)
1912-13..	54	12	0	(233)
1913-14..	76	12	0	(327)
1914-15..	54	8	0	(232)
1915-16..	48	4	0	(205)
1916-17..	50	12	0	(216)

The average **prices of gunny cloth** have been as follows :—

	Price of Hessian cloth 10½oz. 40″ per 100 yds.			
	Rs.	a.	p.	
1879-80 to 1883-84	10	7	11	(100)
1884-85 to 1888-89	8	0	7	(77)
1889-90 to 1893-94	10	6	6	(99)
1894-95 to 1898-99	9	11	8	(93)
1899-1900 to 1903-04 ..	10	2	10	(97)
1904-05 to 1908-09	11	14	1	(112)
1909-10..	9	3	6	(88)
1910-11..	9	5	6	(89)
1911-12..	11	14	0	(113)
1912-13..	16	6	0	(156)
1913-14..	17	0	0	(162)
1914-15..	12	4	0	(117)
1915-16..	20	10	0	(197)
1916-17..	17	6	0	(166)

The 1918 crop.—The final figures of outturn for the three provinces work out as follows :—

Province.	Bales.		Difference.
	1917.	1918.	
Bengal (including Cooch Behar)	7,948,956	6,390,934	—1,558,022
Bihar and Orissa (including Nepal) ..	734,262	403,938	—330,324
Assam	* 245,849	214,188	—31,661
Total ..	8,929,067	7,009,060	—1,920,007

Province.	Area in acres.		Difference.
	1917	1916.	
Bengal (including Cooch Behar) ..	2,412,427	2,249,026	—163,401
Bihar and Orissa	223,272	150,988	—72,284
Assam	* 100,300	97,200	—3,100
Total ..	2,735,999	2,497,214	—238,785

* Revised.

The Jute Mills Association now one of the most important, if not the most important, of the bodies affiliated to the Bengal Chamber of Commerce, was started under the following circumstances:—In 1886 the existing mills, finding that, in spite of the constant opening up of new markets, working results were not favourable, came to an agreement, with the late S. E. J. Clarke, Secretary to the Chamber of Commerce, as trustee, to work short time. The only mills which stood out of this arrangement were the Hooghly and Serajgunge. The first agreement, for six months dating from 15th February 1886, was subsequently renewed at intervals without a break for five years up to February 15, 1891. The state of the market at the time of the renewals dictated the extent of the short time, which varied throughout the five years between 4 days a week, 9 days a fortnight and 5 days a week. Besides short time, 10 per cent. of the sacking looms were shut down for a short period in 1890. An important feature of this agreement was a mutual undertaking by the parties not to increase their spinning power during the currency of the agreement, only a few exceptions being made in the case of a few incomplete new mills.

The officials of the Association are:—

Chairman: Mr. A. R. Murray.

Members of Committee: Sir Archy Birkmyre, Mr. P. W. Newson, Mr. H. M. Peat, and Mr. G. F. Rose.

Working days.—With the introduction of the electric light into the mills in 1896, the working day was increased to 15 hours, Saturdays included, which involved an additional amount of cleaning and repairing work on Sundays. In order to minimise this Sunday work and give them a free Sunday, an agitation was got up in 1897 by the Mill European assistants to have the engines stopped at 2 or 3 p.m. on Saturdays. The local Government took the matter up, but their action went no further than applying moral suasion, backed by a somewhat half-hearted threat. The Mill Association held meetings to consider the question and the members were practically agreed as to the utility of early closing on Saturdays, but, *more suo*, could not trust themselves to carry it out without legislation. Unfortunately the Government of India refused to sanction the passing of a Resolution by the provincial Government under the Factory Act and the matter was dropped. Only a year or two ago the Jute Mills Association in despair brought out an American business expert, Mr. J. H. Parks, to advise them on the possibility of forming a jute trust with a view to exercising some control over the production and price of jute. Mr. Parks came, and wrote a report which the Association promptly pigeon-holed because the slump was over and the demand was so prodigious that there was no need to worry about the price of jute.

An Association, styled the **Calcutta Jute Dealers Association**, has lately been formed in Calcutta to promote and to guard the common interests of its members as dealers in jute for local consumption. The members are balers and brokers of jute for sale to the jute mills in and around Calcutta. Committee:—Mr. Geo. Morgain, *Chairman*, Members:—Messrs. G. S. Alexander, D. P. How, N. Blount, M. Morrison, and A. Tosh.

Effects of the War.—The official review of the Trade of India in 1916-17 says:—The value of the exports of raw jute increased in 1916-17 by nearly Rs. 65 lakhs to Rs. 1,629 lakhs. The quantity exported, however, was less than in the preceding year. The estimated yield of the crop was 12 per cent. above that of the previous year, *viz.*, 1,490,000 tons or 8,340,000 bales. Owing to the lack of tonnage and other abnormal circumstances brought about by the war, the quantity exported was 10 per cent. below that of the previous year. Of the consumers the United Kingdom and Italy took less, while the United States, France (mainly *via* Dunkirk), Russia (*via* Vladivostok) and Brazil took greater quantities. There were, of course, no exports to enemy countries which, took more than 27 per cent. in the five years ending 1913-14, the pre-war year. The increase in the value accompanied by a decrease in the volume of exports was due to the very high range of prices during the months of September, October, November and December. Towards the close of the year under review prices steadily declined, and have since gone still lower.

Jute Manufactures.—The value of the exports now approximates to Rs. 42 crores. In spite of the war with its attendant difficulties of freight and finance, the exports of gunny cloth showed an increase of Rs. 241 lakhs of which Rs. 163 lakhs were due to higher prices and Rs. 78 lakhs to an increase in the volume of exports. There were also an increase of Rs. 118 lakhs in the value of gunny bags exported. The number of bags shipped increased while the weight decreased, sand bags for war purposes being lighter than the ordinary bags for transporting grain. Exports to Australia in 1916-17 were a record. The United Kingdom with Australia took more than half of the number of bags exported while the United States took more than half of the quantity of cloth exported.

There were 74 mills at work throughout the year with 39,697 looms and 824,315 spindles. The number of persons employed was 262,552. There were no difficulties as regards the supply of labour. Four new mills came into existence. It is improbable that these, with one exception, can begin manufacturing to any extent until after the war.

Hemp and Jute Substitutes.

Experiments have been made during the last few years by the Agricultural Department of the Government of India with the **Deccan hemp** plant (*Hibiscus cannabinus*), which yields a fibre very similar to jute. As a result, a new variety of the plant, known as Type 8, has been obtained, which it is now proposed to introduce into several parts of India, and, as a beginning, the variety is to be grown on a number of estates in Bihar. A sample of the fibre prepared from this variety by the usual methods of retting was 10 ft. to 12 ft. long, of an exceptionally light colour, well cleaned, and of good strength. It was valued at £18 per ton with Bimlipatam jute at £12 10s., and Bengal first mark jute at

£17 per ton. Deccan hemp has been grown fairly extensively in Bombay, the Central Provinces, and Madras, where it is used for ropes and cordage and also for the manufacture of a coarse sackcloth. A valuable feature of the plant is its suitability for cultivation in such parts of India as are not suitable for jute.

Prior to the war, the United Kingdom's requirements of hemp were mainly supplied by the following countries in order of importance :—the Philippine Islands, New Zealand, India, Russia, Italy and Germany. The opinion appears to be held that the effect of the war will be to cause very considerable changes in the character of the fibre market. There will probably be labour difficulties, it is thought, in the preparation of the hemp crops of Russia and Hungary, and it is not unlikely that the world will look to countries such as India for the supply of fibres which may be used as substitutes for the European varieties of hemp. There can be no doubt that one of the early effects of the war was to firm up hemp prices. As far as Indian hemp is concerned, values were persistently depreciated during the first six months of 1914 owing to large stocks held ; but the closure of the Russian hemp market on the outbreak of war resulted in a marked improvement in values, and there was a keen demand and a considerable rise in price.

Profits of Bengal Jute Mills.

An estimate of the profits of the Bengal jute mills during the first half of 1918 has been made in the Department of Statistics from a detailed analysis of the published accounts of 36 jute mill companies (including one sterling company registered in the United Kingdom) whose accounts were closed during the half year. It is interesting to note how sterling companies are being transformed into rupee companies. From 1914 to 1916 there were 9 sterling companies (including one French company working at Chandernagore) : three of these were transformed in 1917 into rupee companies under the Indian Act. There are thus 6 sterling companies now working in Bengal, of which one is, as stated above, dealt with in the statistics for the first half of 1918. The other five companies which close their accounts in the second half of the year will be dealt with in the next statement, that is, for the latter half of 1918. The compilation of the data has been made uniform as far as practicable, and the 36 mills have been regarded as one mill. In all cases the profits have been shown after deduction of Indian income tax and super tax, because the amount of tax paid was not always shown separately in the Balance Sheets but lumped with other items of expenditure under the head of "Manufacturing and other expenses." In the case of the sterling company the British income tax and the British excess profits duty have been deducted as well as the Indian income tax and super tax. The profits are shown before and after deduction of interest on debentures. Some companies have paid off their debentures, others are in the process of doing so, while others again have created debenture redemption funds out of surplus profits. Debenture interest is not shown separately in all the published accounts but the amounts have been ascertained as correctly as possible. No allowance has been made for depreciation as no uniform practice of writing off depreciation is followed by jute mills in Bengal. The results are summarised below as compared with the pre-war profits and the profits since the outbreak of war.

Year.		Number of Cos. whose accounts were closed during each half year.	Profits before deduction of interest on debentures.	Interest on debentures.	Net profits (subject to depreciation).	Ratio of net profits (Col. 5) to total paid up capital.
1		2	3	4	5	6
			Rs. (1000)	Rs. (1000)	Rs. (1000)	
1914..	First half (pre-war).	31	64,90	9,94	54,96	10
	Second half ..	38	82,45	13,96	68,49	
1915..	First half ..	31	1,70,45	10,07	1,60,38	58
	Second half ..	38	5,52,60	13,74	5,38,86	
1916..	First half ..	32	3,94,99	10,25	3,84,74	75
	Second half ..	39	5,51,39	12,88	5,38,51	
1917..	First half ..	34	2,66,78	9,59	2,57,19	49
	Second half ..	40	4,00,35	11,74	3,88,61	
1918 ..	First half ..	36	7 28,00	9,50	7.18,50	73*

* This ratio has been calculated on the profits of only the first half of 1918.

It will be seen from the above statement that the profits during the first half of 1918 have surpassed all previous records

Hydro-Electric Development.

India promises to be one of the leading countries of the world in regard to the development of hydro-electric power and great strides in this direction have already been made. India not only specially lends itself to projects of the kind, but peremptorily demands them. Cheap motive power is one of the secrets of successful industrial development and the favourable initial conditions caused by the war, the enthusiasm for industrial development which has seized nearly all classes of educated Indians, and the special attention which the circumstances of the war have compelled Government to direct towards the scientific utilisation of Indian natural resources all point to a rapid growth of industrial enterprise in all parts of India within the next few years. Indeed, the process, for which sound foundations had been laid before the war, is now rapidly under way. India is severely handicapped compared with other lands as regards the generation of power by the consumption of fuel, coal or oil. These commodities are all difficult to obtain, and costly in India except in a few favoured areas. Coal supplies, for example, are chiefly centred in Bengal and Chota Nagpur and the cost of transport is heavy. Water power and its transmission by electricity offer, on the other hand, immense possibilities, both as regards the quantity available and the cheapness at which the power can be rendered, in all parts of India.

Water power schemes, pure and simple, are generally difficult in India, because the power needs to be continuous, while the rainfall is only during a small portion of the year. Perennial rivers with sufficient water throughout the year are practically non-existent in India. Water, therefore, must be stored for use during the dry season. Favourable sites for this exist in many parts in the mountainous and hilly regions where the heaviest rainfalls occur and the progress already made in utilising such opportunities by the electrical transmission of power affords high encouragement for the future. Further, hydro-electric schemes can frequently be associated with important irrigation projects, the water being first used to drive the turbines at the generating stations and then distributed over the fields. Water, as was pointed out in an interesting paper on the subject presented last autumn to the Indian Industrial Commission by Mr. R. B. Joyner, C.I.E., M. Inst. C.E., lately in the Irrigation Branch of the Bombay Public Works Department and now engaged in the Tata's Hydro-Electric Works in Western India, "can be stored in this country at a third or a quarter of the cost which there would be in other countries. This is not merely on account of the cheaper labour, which would be the chief reason in an earthen dam, but in masonry or concrete dams. It is also because we do not use cement, which, for some reason not well-known to me, is generally deemed essential elsewhere, though it cannot really be so suitable."

Bombay Hydro-Electric Works.

The greatest water-power undertakings i India—and in some respects the greatest in th world—are the Tata hydro-electric scheme recently brought to fruition, and constantl undergoing expansion, for the supply of powe in the city of Bombay. Bombay is after Londo the most populous city in the British Empir and it is the largest manufacturing town in Asi Its cotton mills and other factories use ove 100,000 horse power of mechanical energy an until a year or two ago this was almost entirel provided by steam, generated by coal comin from a distance—mostly Bengal. The Tat Hydro-Electric Power Scheme, now an accom plished fact, marked one of the big steps forwar made by India in the history of its Industri development. It was the product of the fertil brain of Mr. David Gostling, one of the wel known characters of Bombay, a little over decade ago. The exceptional position of th Western Ghats, which rise 2,000 feet fro sea-level within a very short distance of th Arabian Sea, and force the monsoon as it sweep to land, to break into torrential rain at th mountain passes was taken full advantage o and the table lands behind the Ghats form magnificent catchment area to conserve thi heavy rainfall in. Mr. Gostling pressed th scheme on the attention of Mr. Jamsetji Tat for years, and with perseverance collected dat which he laid before that pioneer of the large industries in India. He summoned the aid o experts from England to investigate the plan The scheme was fully considered for six lon years. Meanwhile both Mr. J. N. Tata and M David Gostling passed away, but the sons of th former continued the work of their father an on Mr. Gostling's death, Mr. R. B. Joyner aid was sought to work out the Hydrauli side of the undertaking.

The scheme completed, a syndicate secure the license from Government and an endeavou was made to enlist the support of financiers o England who tried to impose terms which wer not acceptable. Meanwhile, the attention of Si George Clarke (now Lord Sydenham), ther Governor of Bombay, and an engineer o distinction himself, was drawn to the scheme The interest shown by him drew the attentio of Indian Chiefs in the Presidency of Bombay and outside it to its possibilities, funds flowe in and a company with an initial capital o 1,75,00,000 Rupees was started.

The hydro-electric engineering works in connection with the project are situated at and about Lonavla above the Bhor Ghat. The rainfall is stored in three lakes at Lonavla, Walwhan, Shirawta whence it is conveyed in masonry canals to the forebay or receiving reservoir. The power-house is at Khopoli, at the foot of the Ghats, whither the stored water is conveyed through pipes, the fall being one of 1,725 feet. In falling from this height the water develops a pressure of 750 lbs. per square inch and with this force drives the

turbines or water wheels. The scheme was originally restricted to 30,000 Electrical horse power, but the Company, in view of the increasing demand for power from the Bombay mills, decided to extend the works by building the Shirawta Dam and issued further Shares bringing the capital to Rs. 3,00,00,000, the capacity of the scheme being increased to more than 40,000 electrical horse power. Issued Capital 7 per cent. Preference 8,735 shares fully paid and Ordinary 18,000, out of which 10,000 are fully paid and 8,000 new shares, on which Rs. 400 have been called up. There is also a Debenture Loan of Rs. 85 lakhs. The works were formally opened by H. E. the Governor of Bombay on the 8th February 1915. At present there are altogether 36 mills with motors of the aggregate B. H. P. of 40,000 in service. In addition to the cotton and flour mills which have contracted to take supply from the Company for a period of ten years, the Company have entered into a contract with the Bombay Electric Supply and Tramways Company, Limited, for energy required by them for two of their sub-stations and the necessary plant for one of these has been ordered. There remain many prospective buyers of electrical energy and the completion of the Company's full scheme will not suffice for all such demands. Besides the Bombay cotton mills, which alone would require about 100,000 horse power, there are, for instance, tramways, with possibilities of suburban extensions. The probable future demand is roughly estimated at about 160,000 H. P.

Investigations with a view to developing the electrical supply led to the discovery of a highly promising water storage site in the valley of the Andhra River, situated near the present lakes. A scheme was prepared, to be carried out by a separate company and providing for holding up the Andhra River by a Dam, about a third of a mile long and 192 feet high, at Tokerwadi. This dam will hold up a lake nearly twelve miles long, the further end of which approached the brink of the Ghats at Khand. Here, a tunnel, a mile and a quarter long, will carry the water to the surge chamber, whence it will enter the pipes for a vertical drop of about 1,750 feet to the generating station at Bhivpuri, about 17 miles from the generating station at Khopoli. The scheme is designed to yield 100,000 horse power in its full development. A new company to operate the scheme was formed on the 31st August 1916, with an initial capital of Rs. 2,10,00,000, divided into 160,000 Ordinary shares of Rs. 1,000 each and 5,000 Preference shares of Rs. 1,000 each, this being the Andhra Valley Power Supply Company, Limited. This Company will pay annually to the Tata Hydro-Electric Power Supply Company 15 per cent. upon the profits (after making certain deductions), or a sum of Rs. 50,000, whichever shall be the larger sum, the intention being that the new company shall pay annually to the Tata Hydro-Electric Power Supply Company a minimum sum of Rs. 50,000. The areas intended to be supplied by this Company are the town and island of Bombay and the Suburban Municipalities of Bandra and Kurla. The Hydraulic Works consisting of the Dam, the Tunnel and the Pipe Lines, have already been commenced and have shown two seasons' satisfactory progress. Contracts for machinery have been satisfactorily entered into with manufacturers of repute. It is estimated that supply of power will commence about the end of 1920, the scheme taking a couple of years more to come fully into commission.

Mysore Installation.

The first hydro-electric scheme undertaken in India or, indeed, in the East, was that on the River Cauvery, in Mysore State, which was inaugurated, with generating works at Sivasamudram, in 1902. The Cauvery rises in the British district of Coorg, and flows right across Mysore. The first object with which the installation was undertaken was the supply of power to the goldfields at Kolar. These are 92 miles distant from Sivasamudram and for a long time this was the longest electrical power transmission line in the world. Current is also sent to Bangalore, 59 miles away, where it is used for both industrial and lighting purposes.

The following table shows the growth of the scheme since its inauguration fifteen years ago, the figures having been placed at our disposal by the present Chief Electrical Engineer with the Mysore Government, Mr. S. G. Forbes:—

Year of Installation.	H. P. Capacity.	Total.
1902	6,000	6,000
1905	5,000	11,000
1908	2,000	13,000
1915	4,000	17,000
1916	4,000	21,000

The total capacity of the Sivasamudram installation, after the completion of some improvements now in hand, will be 22,650 h.p. and it is estimated that an expenditure of approximately Rs. 15 lakhs on new anikats and channels for leading water from the Cauvery would enable this to be increased to 30,000 net h.p. This would be the maximum obtainable with the water which the Cauvery affords and, therefore, with the number of consumers, large and small, rapidly increasing, the necessity of a completely new installation elsewhere, to be operated in parallel with or separately from that at Sivasamudram, has been recognised. Two projects offer themselves. The first would involve the use of the River Shimsha, a tributary of the Cauvery which has natural falls, and the second, known as the Mekadatu project, would have its power house on the Cauvery, 25 miles down-river from Sivasamudram and just within the borders of Mysore State, adjacent to the Madras Presidency. The head of water available at Sivasamudram is 400 feet, that on the Shimsha 618 feet net, which would generate 39,500 e. h. p. At Mekadatu the Cauvery runs in rapids and a dam and a channel 20,000 feet long with a 22½ feet bed would be necessary. There would be three generating units, each giving an output of 4,000 e. h. p. Future extensions yielding an additional 8,000 h. p. could be made.

Works in Kashmir.—A scheme of much importance from its size, but more interesting because of the developments that may be expected from it than for the part which its current supply already plays in the life of the countryside, is one installed a few years ago by the Kashmir Durbar, utilising the River Jhelum, near Baramulla, which lies thirty-four miles north-west of Srinagar. The head-works of the Jhelum power installation are situated six and a half miles from the power house and the main connection between the two is a great timber flume. These works and the forebay at the delivery end of the flume have a capacity for carrying water sufficient for the generation of 20,000 electrical horse power. Four pipes 600 feet long lead from the forebay to the power house, and from forebay to water-wheel there is an effective head of 395 feet. There are four vertical waterwheels, each coupled on the same shaft to a 1,000 k.w., 3-phase, 2,300 volt, 25-period generator running at 500 r.p.m., and each unit is capable of taking a 25 per cent. overload, which the generator end is guaranteed to maintain with safety for two hours. The power house is of sufficient capacity to allow of 15,000 k.w. generating plant being installed within it. Two transmission lines run side by side as far as Baramulla, 21 miles distant, at which point one terminates. The other continues to Srinagar, a further 34 miles. The installation at Baramulla was originally utilised for three floating dredgers and two floating derricks, for dredging the river and draining the swampy countryside and rendering it available for cultivation, but these operations have temporarily been curtailed, so that only one dredger is now in operation. The lighting of Baramulla has lately been taken in hand with satisfactory results and it is expected that the lighting demand will rapidly increase and that a small demand for power will soon spring up. At Srinagar, the line terminates at the State silk factory, where current is supplied not only for driving machinery and for lighting, but for heating. The greater part of Srinagar city is now electrically lighted and during the past year a motor load of over 100 k.w. has been connected with the mains, motors being hired out to consumers by the Electrical Department. This step was taken with a view to educating the people in the use of electric power and it has been entirely successful.

Silk.

In the early days of the East India Company the Indian Silk trade prospered greatly, and various sub-tropical races of the Silkworm were introduced. But the trade gradually declined for the following reasons:—

In the seventeenth and eighteenth centuries India's chief competitor in the silk trade was the Levant Company. Successful efforts, however, were made to acclimatise in Europe one or two races of a temperate worm, procured from China and Japan. When sericulture became part of the agriculture of France and Italy, a quality of silk was produced entirely different from that of India and Turkey, and its appearance created a new demand and organized new markets.

All subsequent experience seems to have established the belief that the plains of India, or at all events of Bengal, are never likely to produce silk that could compete with this new industry. On the lower hills of Northern India, on the other hand, a fair amount of success has been attained with this (to India) new worm, as, for example, in Dehra Dun and Kashmir. In Manipur, it would appear probable that *Bombyx mori*, possibly obtained from China, has been reared for centuries. The caprice of fashion has, from time to time, powerfully modified the Indian silk trade. The special properties of the *Eorah* silk were formerly much appreciated but the demand for them has now declined. This circumstance, together with defective systems of rearing and of hand-reeling and weaving, accounts largely for the present depression in the mulberry silk trade of India.

Mulberry-feeding worms.—Sir George Watt states that in no other country does the necessity exist so pressingly as in India to treat the subject of silk and the silk industries under two sections, *viz.*. Bombycidae, the domesticated or mulberry-feeding silk worms; and Saturniidae, the wild or non-mulberry-feeding worms. In India the mulberry worm (Bombyx Mori) has been systematically reared for many centuries, there being six chief forms of it. In the temperate tracts of India various forms of *Morus alba*, (the mulberry of the European silk-producing countries), are grown specially as food for the silkworm. This is the case in many parts of the plains of Northern India, Baluchistan, Afghanistan, Kashmir, and along the Himalaya at altitudes up to 11,000 feet. The other species even more largely grown for the Indian silkworm is *M. Indica* of which there are many distinctive varieties or races. This is the most common mulberry of Bengal and Assam as also of the Nilgiri hills.

India has three well-known purely indigenous silkworms: the *tasar*, the *muga* and the *eri*. The first is widely distributed on the lower hills, more especially the sides of the great central tableland, and feeds on several jungle trees. The second is confined to Assam and Eastern Bengal, and feeds on a laurel. The third exists in a state of semi-domestication, being reared on the castor-oil plant. From an art point of view the *muga* silk is the most interesting and attractive, and the cocoon can be reeled readily. The *eri* silk, on the other hand, is so extremely difficult to reel that it is nearly always carded and spun—an art which was practised in the Khasi Hills of Assam long before it was thought of in Europe.

Experiments and results.—Numerous experiments have been made with a view to improving sericulture in India. French and other experts are agreed that one of the causes of the decline of the silk industry in India has been the prevalence of diseases and parasites among the worms, the most prevalent disease being pebrine. M. Lafont, who has conducted experiments in cross breeding, believes that improvement in the crops will be obtained as soon as the fight against pebrine and other diseases of the worms is taken up vigorously by the producers of seed and the rearers of worms, while improvement in the quality of the cocoons will be obtained by rearing various races, pure and cross breds.

In Kashmir and Mysore satisfactory results have been obtained. In the former State sericulture has been fostered on approved European principles with Italian reeling machinery, seed being imported annually on a large scale. In 1897 in Mysore Mr. Tata, after selecting a plantation and site for rearing houses, sent to Japan for a Superintendent and trained operatives. The Mysore authorities have made a grant of Rs. 3,000 a year to the Tata farm in return for instruction given to the people of Mysore in Japanese methods of growing the mulberry and rearing the insects. The products of the Mysore state are exported to foreign countries from Madras. The work of the Salvation Army is also noteworthy in various parts of India. They have furnished experts, encouraged the planting of mulberry trees, and subsidised several silk schools. The draft prospectus has been issued of a silk farm and institute to be started at Simla under the auspices of the Salvation Army. The Lieut.-Governor of the Punjab has permitted the school to be called after his name, and the Punjab Government is making a grant of Rs. 2,000 this year towards the expenses. Sir Dorabji Tata has also made a donation of Rs. 1,000. The Bengal Silk Committee under the guidance of some French experts have conducted cross-breeding experiments with a view to establish a multivoltine hybrid of European quality. There is a Government sericultural farm at Berhampore, where, it is said, a pure white multi-voltine of silk worm is reared. The results of the Bengal Committee's labours may be summed up as follows: the only really effective method of dealing with the problem is to work up gradually to a point at which the whole of the seed cocoon necessary for the province will be supplied to rearers under Government supervision, and to establish gradually a sufficient number of large nurseries throughout the silk districts of the province.

In 1915 there was issued by the Agricultural Research Institute, Pusa, a *Bulletin* (No. 48 of 1915) entitled "First Report on the Experiments carried out at Pusa to improve the Mulberry Silk Industry." In a short Prefatory note Mr. Bainbrigge Fletcher (Imperial Entomo-

logist) explains that the object of the Bulletin is to place on record some of the more important experiments which were commenced at Pusa in the year 1910 and have since been carried on in the endeavour to fix a superior multivoltine race of the Mulberry Silkworm which would not degenerate and which would yield silk better both in quality and outturn than that supplied by the multivoltine races which are reared at present.

Central Nurseries.—The report of the Agricultural Department, Bengal, for the year ending June 30, 1913, gives an account of a scheme which has been devised with the object of reclaiming the silk industry. The aim of the scheme is gradually to establish throughout the silk districts a sufficient number of central nurseries with rearing houses and thus enable the whole of the seed cocoons required in the province to be supplied under Government supervision. It is believed that this is the only really effective method of dealing with the problem. A number of the existing smaller nurseries were closed during 1913 and others are being converted into enlarged and improved central nurseries with rearing houses complete. The ultimate success of the scheme depends largely on the willingness of the rearers to pay an adequate price for pure seed.

A pamphlet was published in 1915, by Mr. M. N. De, Sericultural Assistant at Pusa, which contains practical hints on improved methods which are recommended to be used for reeling mulberry silk in Bengal and other silk producing districts. It has been found that, by the provision of two small pulleys to the ordinary Bengal type of reeling machine, superior thread can be obtained, the cost of the extra apparatus is merely nominal (five or six annas per machine) whilst the suitability of the machine for cottage workers is maintained. By attention to such simple points as the stifling and storage of cocoons and the temperature and quality of the water used in the reeling pans, great improvements can be effected in most silk centres in Bengal and other districts.

Exports of Silk.—As a result of the war the trade has showed in some degree signs of revival from its decadent condition, both as regards its volume and value. The value of exports during 1915-16 improved by Rs. 1½ lakhs to Rs. 27½ lakhs, of which raw silk accounted for Rs. 24 lakhs. In 1916-17 the total exports rose to Rs. 54¾ lakhs.

The export of silk manufactures in 1916-17 was valued at Rs. 5,43,000.

Imperial Silk Specialist.—At the end of 1915 it was decided that the first step to be taken to revive the silk industry should be the employment of a qualified expert who, after a careful study of the conditions not only in India but in other silk-producing countries will formulate recommendations for the consideration of Government. With the approval of the Secretary of State, Mr. H. Maxwell Lefroy, formerly Imperial Entomologist and now Professor at the Imperial College of Science and Technology, South Kensington, was appointed to the temporary post of Imperial Silk Specialist.

Indigo.

Indigo dyes are obtained from the Indigofera, a genus of Leguminosae which comprises some 300 species, distributed throughout the tropical and warm temperate regions of the globe, India having about 40. Western India may be described as the headquarters of the species, so far as India is concerned, 25 being peculiar to that Presidency. On the eastern side of India, in Bihar, Bengal, Assam and Burma, there is a marked decrease in the number of species but a visible increase in the prevalence of those that are met with.

There is evidence that when Europeans first began to export the dye from India, it was procured from the Western Presidency and shipped from Surat. It was carried by the Portuguese to Lisbon and sold by them to the dyers of Holland, and it was the desire to obtain a more ample supply of dye stuff that led to the formation of the Dutch East India Company and so to the overthrow of the Portuguese supremacy in the East. Opposition to indigo in 17th century Europe was keen owing to its interference with the wood industry, but it was competition to obtain indigo from other sources than India that led to the first decline of the Indian indigo industry. In the middle of the eighteenth century, when the cultivation of indigo in the West Indies had been given up—partly on account of the high duties imposed upon it and partly because sugar and coffee were found to be more profitable—the industry was revived in India, and, as one of the many surprises of the industry, the province of Bengal was selected for this revival. It had no sooner been organised, however, than troubles next arose in Bengal itself through misunderstandings between the planters, their cultivators and the Government, which may be said to have culminated in Lord Macaulay's famous *Memorandum* of 1837. This led to another migration of the industry from Lower and Eastern Bengal to Tirhut and the United Provinces. Here the troubles of the industry did not end, for the researches of the chemical laboratories of Germany threatened the very existence of any natural vegetable dye. They first killed the maddar dye of Europe, then the safflower, the lac and the *al* dyes of India, and are now advancing rapidly with synthetic indigo, intent on the complete annihilation of the natural dye. Opinions differ on many aspects of the present vicissitude; meantime the exports from India have seriously declined and salvation admittedly lies in the path of cheaper production both in cultivation and manufacture. These issues are being vigorously faced and some progress has been accomplished, but the future of the industry can scarcely help being described as of great uncertainty. The issue is not the advantage of new regulations of land tenure, but one exclusively of natural *versus* synthetic indigo. (See Watt's "Commercial Products of India.") In February 1915 a conference was held at Delhi when the possibility of assisting the natural

Indigo industry was considered from three points of view—agricultural, research and commercial. The agricultural or botanical side of the question is fully discussed by Mr. and Mrs. Howard of Pusa in Bulletins Nos. 51 and 54 of the Agricultural Research Institute. Other aspects of the question were fully examined last year in the Agricultural Journal of India by Mr. W. A. Davis, Indigo Research Chemist to the Government of India. An **Indigo Cess Bill** was passed in the Imperial Legislative Council in 1918. It provides for a cess on indigo exported from India for the scientific investigation of the methods of cultivation and manufacture of indigo, the proceeds of the cess being received and expended by Government.

Decline of the Industry.—Since synthetic indigo was put upon the market, in 1897, the natural indigo industry of India has declined very rapidly; apart from slight recoveries in 1906-07 and 1911-12, the decline continued without a break until the revival due to the impossibility of obtaining artificial dyes in sufficient quantities during the war. The figures for the last few years may be contrasted with those for the five years ending in 1897, in which the area under indigo averaged 2,400 square miles and the value of the exports over £3,000,000 a year.

	Area under Indigo.	Quantity Exported.	Value of Exports.
	Acres.	Cwts.	£
1901-02 ..	791,000	89,750	1,234,837
1902-03 ..	646,000	65,377	803,738
1903-04 ..	707,000	60,410	717,468
1904-05 ..	477,000	49,252	556,405
1905-06 ..	384,000	31,186	390,918
1906-07 ..	421,000	35,102	466,985
1907-08 ..	394,000	32,490	424,849
1908-09 ..	284,000	24,946	326,986
1909-10 ..	289,000	18,061	234,544
1910-11 ..	276,000	16,939	223,529
1911-12 ..	271,000	19,155	250,535
1912-13 ..	220,000	11,857	147,000
1913-14 ..	176,000	10,939	142,000
1914-15 ..	148,400	17,142	599,940
1915-16 ..	314,300	41,942	1,385,428
1916-17 ..	756,400	33,500	1,383,000

Present Position.—The crop is most important in Bihar and Madras; in the Punjab and United Provinces it now occupies little over 100 square miles altogether. In Bengal the crop is largely raised by British planters, in the other provinces chiefly by native cultivators. Scientific research work on questions connected with cultivation and manufacture has been carried out by the Bihar Planter's Association, with the aid of a grant from Government since 1897.

In 1916-17 the production of indigo was estimated at 95,000 cwts. as against 55,000 in the preceding year, but the exports decreased owing to a larger local demand consequent on the scarcity of synthetic dyes. The exports were 33,500 cwts, compared with 41,900 cwts. in the preceding year and 15,400 cwts. the pre-war quinquennial average. The average declared value increased from Rs. 496 per cwt. in 1915-16 to Rs. 618 per cwt. in 1916-17. In December 1918 the price at the Calcutta sales was Rs. 562 per cwt. of good to fine Bengal and Tirhoot indigo.

Crop Forecast.—The Director of Statistics in his final memorandum on the crop of 1918-19 states that the total area is estimated at 300,700 acres, which is as much as 58 per cent. below the finally revised acreage (710,600 acres) of 1917-18. The total yield of dye is estimated at 44,100 cwts. as against 88,300 cwts., the finally revised estimate of the previous year, or a decrease of 50 per cent. The production of the artificial dye in the United Kingdom has not been without its effect on the Indian industry. The season, on the whole, has not been favourable for the indigo crop, owing mainly to deficient rainfall.

Details for the provinces are given below:—

Provinces.	Estimated total yield.		Acreage.		Average yield per acre.	
	1918-19.	1917-18.	1918-19.	1917-18.	1918-19.	1917-18.
	Cwts.	Cwts.	Acres.	Acres.	lbs.	lbs.
Madras	28,800	42,900	149,100	324,400	22	15
Bihar and Orissa	6,300	10,200	64,200	86,700	11	13
United Provinces	3,800	17,400	50,700	190,200	8	10
Punjab	3,300	15,500	19,000	90,700	19	19
Bombay and Sind (including Indian States)	1,100	1,800	7,600	11,600	16	17
Bengal	800	500	10,100	7,000	9	8
Total ..	44,100	88,300	300,700	710,600	16	14

Tea.

Tea cultivation in India is chiefly in Assam, Bengal and Southern India, the cultivation elsewhere being comparatively unimportant. The latest available official general statistics are those for the year 1916 (The statistics of production deal, for seasonal reasons, with the calendar year 1916 and those of trade with the official fiscal year 1916-17.) They show a total area of 650,800 acres under tea, 2·5 more than in 1915. Of this area, 601,400 acres were plucked in 1916. The total number of plantations was 4,486 against 4,437 in 1915. The area under cultivation has increased in the last 10 years by 21 per cent. and the production by 51 per cent. The average production per acre for the whole of India, excluding Burma (where the produce of the tea gardens is almost wholly converted into wet pickled tea, which is eaten as a condiment) was 614 lbs. in 1916 as compared with 637 lbs. in 1915.

Area and Production.

The total area under tea was divided between the different Provinces as follows:—

Assam—	Acres.
Brahmaputra Valley	242,470
Surma Valley (Cachar and Sylhet).	146,702
Total, Assam	389,172
Bengal	165,769
Bihar and Orissa (Chota Nagpur) ..	2,160
United Provinces	7,978
Punjab	9,879
Madras	30,919
Travancore and Cochin	42,105
Burma	2,841
Grand Total	650,823

The total production in 1916 was 368,582,688 lbs., divided between the different parts of India as follows:—

	Lbs.
Assam	242,184,571
Bengal	92,644,990
Bihar & Orissa	399,971
United Provinces	2,352,732
Punjab	1,530,101
Madras	11,364,440
Travancore & Cochin	17,959,801
Burma	146,076
Total ..	368,582,688

Features of the Trade.

The quantity exported in 1917-18 was the highest on record,—359 million lbs., an increase of 23 per cent. over the previous year, and of as much as 35 per cent. above the pre-war average. The value of the exports amounted to Rs. 17,6 lakhs and had the level of the previous year prices prevailed the value would have been Rs. 20,69 lakhs, *i.e.*, there was a decrease of Rs. 3,02 lakhs due to lower prices. The average price realized in Calcutta at the auction sales during 1917-18 was 7 annas 3 pies per lb. against 8 annas 8 pies in 1916-17 and was the lowest since 1912-13. The estimated outturn in India in 1917 based on returns received in this Department is 370 million lbs. as against 368 million lbs. in the previous season. The difficulties in obtaining tonnage were the controlling factor in the trade of the year.

The Food Controller of His Majesty's Government formulated a scheme for purchasing and shipping Indian tea between November 1st, 1917, and May 31st, 1918, and this relieved the Indian market during the latter half of the season. The Food Controller originally contracted for 40 per cent. of the Indian crop, but ultimately contracted for 25 million lbs. The excess of this amount and finally took all the tea that offered in order to fill the available tonnage. Of the total shipments from India 90 per cent. was from Bengal, 7 per cent. from Madras, and almost the whole of the remainder from Bombay.

The main features of the export trade were (1) the large increase in the shipments to the United Kingdom, Canada and the United States (2) the increase in the exports to Australia, Egypt, Cape Colony, Persia and Asiatic Turkey (mainly Mesopotamia), and (3) the great decrease in the exports to Russia and to China. The exports to the United Kingdom were higher by 42 million lbs. or 19 per cent. than those in 1916-17, and were 37 per cent. above the pre-war average. It has to be borne in mind that a large part of this made up for the smaller exports in the previous years. The direct shipments to the United States were nearly seven times those of 1916-17 and more than eight times the pre-war average, while those to Canada more than doubled. This was due to the stoppage of exports from the United Kingdom and the requirements of these countries as also. South Africa and South America were met by direct shipments from India. The increase in the demands from North America by 30 million lbs. as compared with the previous year is a satisfactory feature of the trade in spite of Java possessing a shorter sea route to America than India. At the same time the re-exports of Indian tea from the United Kingdom to these markets increased in the calendar year 1917 to 1,419,000 lbs. from 8,014,000 lbs. in 1916. Java has been a keen rival of India in the American market, and the prohibition of import of tea from Java into the United Kingdom and Australia is said to have considerably increased the imports from that source into India.

QUANTITY OF EXPORTS.

The following table shows the quantity of Tea exported by sea and by land to Foreign countries from India, Ceylon, and China, in the years 1896-97 to 1917-18, with variations in index numbers, taking the figure of 1896-97 as 100 :—

—	India.		Ceylon *		China †			
					Black and green.		Brick, tablet & dust.	
	lbs.		lbs.		lbs.		lbs.	
1896-97 ..	152,344,905	[101]	114,460,318	[104]	137,097,600	[85]	75,781,867	[98]
1897-98 ..	158,539,488	[105]	122,395,518	[111]	147,967,200	[92]	68,017,067	[87]
1898-99 ..	177,163,999	[118]	129,661,908	[118]	153,669,067	[95]	71,205,067	[91]
1899-1900 ..	192,300,658	[128]	149,264,603	[136]	144,270,933	[90]	52,190,667	[66]
1900-01 ..	182,594,356	[121]	144,275,608	[131]	119,390,000	[74]	42,740,533	[54]
1901-02 ..	183,710,931	[122]	150,829,707	[137]	128,226,933	[79]	78,512,400	[100]
1902-03 ..	209,552,150	[139]	149,227,236	[135]	140,607,867	[88]	83,813,600	[107]
1903-04 ..	214,300,325	[142]	157,929,333	[143]	132,366,933	[83]	61,493,733	[78]
1904-05 ..	216,770,366	[144]	171,256,703	[156]	112,152,533	[69]	70,784,267	[91]
1905-06 ..	236,090,328	[157]	171,558,110	[156]	108,864,534	[67]	79,506,133	[101]
1906-07 ..	228,187,826	[151]	181,126,298	[164]	130,022,266	[80]	84,940,000	[108]
1907-08 ..	235,089,126	[156]	181,436,718	[165]	129,265,733	[80]	80,885,733	[103]
1908-09 ..	250,521,064	[167]	189,585,924	[172]	120,174,800	[74]	79,617,600	[101]
1909-10 ..	256,438,614	[170]	186,925,117	[170]	123,947,734	[77]	84,158,943	[107]
1910-11 ..	263,515,774	[175]	184,720,534	[168]	137,788,933	[85]	57,251,467	[73]
1911-12 ..	281,815,329	[187]	186,632,380	[169]	127,826,800	[79]	69,733,200	[89]
1912-13 ..	291,715,041	[194]	197,419,430	[179]	103,038,000	[64]	70,061,600	[89]
1913-14 ..	302,556,697	[201]	191,838,946	[174]	114,689,200	[71]	84,307,733	[107]
1914-15 ..	340,433,163	[226]	214,900,333	[195]	143,662,000	[89]	93,776,667	[119]
1915-16 ..	292,593,914	[194]	208,090,279	[189]	126,260,800	[78]	79,259,723	[101]
1916-17 ..	360,621,841	[240]	195,231,592	[177]	Not yet available			
1917-18 ..								

* The figures for years previous to 1905-06 relate to the calendar year as it has been found possible to procure complete data for the official year.

† For calendar year.

The following statement illustrates the variations in prices of Indian tea sold at the auction sales in Calcutta and declared values of exports by Sea in 1888-89 and the six years ending 1916-17, the average price of 1901-02 to 1910-11 being taken as 100 in each case. The figures represent the average of the prices per pound of tea from all districts at each sale :—

Year.	Average price of Indian tea.		Average declared value of Exports by Sea.	
	Price.	Variation.	Price.	Variation.
	As. p.		As. p.	
1888–89	8 2	136	8 8	124
1911–12	7 7	126	7 11	113
1912–13	7 1	118	7 8	110
1913–14	7 9	129	8 3	118
1914–15	7 7	126	8 3	118
1915–16	8 11	149	9 5	135
1916–17	8 8	144	9 2	131

The average price of Indian tea sold at auction in Calcutta in 1917-18 was 7 as. 3 pies per lb. against 8 as. 8 p. in 1916-17 ; and the average declared value of exports by sea was 8. 10 pies per lb. against 9 as. 2 p. in 1916-17.

The following table shows the quantity of tea, green and black, available for consumption in India during the years 1909-10 to 1916-17 :—

Year.	Lbs.	Year.	Lbs.
1909–10	13,477,297	1914–15	19,290,819
1910–11	14,224,808	1915–16	41,311,788
1911–12	15,294,472	1916–17	85,256,846
1912–13	21,730,066	1917–18	Not yet available.
1913–14	22,796,764		

Exports of Indian Tea.

(In thousands of £ sterling).

COUNTRIES.	1913-14	1914-15	1915-16	1916-17	1917-18
	£(1 000)	£(1,000)	£(1,000)	£(1,000)	£(1,000)
United Kingdom	7,232	8,162	9,801	8,671	8,535
Russia	1,110	667	1,411	1,028	266
China (exclusive of Hongkong)	338	261	344	304	102
Canada	430	395	333	317	671
Australia and New Zealand	326	366	352	183	352
Ceylon	163	136	169	148	186
United States	69	86	128	109	683
Chile	3	9	37	79	65
Turkey, Asiatic	102	49	114	77	104
Straits Settlements	24	22	25	18	12
Persia	9	83	401	66	207
Egypt	51	23	40	41	216
Germany	25	7	..	..	..
Arabia	10	15	36	16	92
Other countries	91	71	130	124	291
Total British Empire	8,225	9,127	10,830	9,415	10,200
„ Foreign countries	1,758	1,225	2,491	1,766	1,582
GRAND TOTAL	9,983	10,352	13,321	11,181	11,782

Exports of Indian Tea (Quantity in Lbs.)

COUNTRIES.	Average of five years 1909-10 to 1913-14.	1916-17	1917-18
BRITISH EMPIRE.	lbs.	lbs.	lbs.
United Kingdom	194,481,000	224,928,000	266,964,000
Canada	10,195,000	8,443,000	21,153,000
Australia	8,978,000	4,618,000	9,920,000
Ceylon	4,162,000	3,647,000	4,484,000
Egypt	1,209,000	1,081,000	6,226,000
Cape Colony	116,000	606,000	3,229,000
Other British Possessions	2,028,000	2,290,000	4,218,000
Total British Empire	221,169,000	245,613,000	316,194,000
ALLIES.			
Russia	29,614,000	27,604,000	8,122,000
United States	2,439,000	3,032,000	20,665,000
China	7,899,000	9,229,000	3,245,000
Other Allies	78,000	86,000	737,000
Total Allies	40,030,000	39,951,000	32,769,000
Turkey Asiatic	3,324,000	1,483,000	1,977,000
Persia	347,000	1,263,000	3,486,000
Chile	44,000	1,736,000	1,597,000
Other countries	1,583,000	1,357,000	3,151,000
Total lbs.	266,497,000	291,403,000	359,174,000
Total value in Rs.	13,06,78,000	16,77,10,000	17,67,26,000

Coffee.

The history of the introduction of coffee to India is very obscure. Most writers agree hat it was brought to Mysore some two cenuries ago by a Mahommedan pilgrim named aba Budan, who, on his return from Mecca, rought seven seeds with him. This tradition so universally believed in by the inhabitants the greater part of South India, that there ems every chance of its being founded on ct. About the beginning of the 19th century ere is no doubt coffee had found its way to dia, and in 1823 a charter was granted to rt Gloster, near Calcutta, authorising it to come a cotton mill, a coffee plantation and rum distillery. Some of the coffee trees anted in fulfilment of that charter are supposed be still alive, and about the same time coffee as successfully grown in the Botanic Gardens lcutta; but the industry of coffee planting where found an abiding place on the plains India but migrated to the hills of South dia, in Mysore more especially, and thus o the very region where tradition affirms had been introduced two centuries previously.

The first systematic plantation was apparly Mr. Cannon's near Chikmuglur. This was ablished in 1830. It is supposed, however, that jor Bevan may have actually grown coffee on Wynad at a slightly earlier date and that Mr. kburn's Shevaroy plantation bears the same e as Mr. Cannon's. In 1840 Mr. Glasson formed a plantation at Manantoddy, and in 1846 ntations were organised on the Nilgiri hills.

The Position of the Industry.—The reported area under coffee has shown a continuous minution since 1896.

It is reported that in some of the coffee-growing districts coffee is giving way to tea, where the altitude is not prohibitive, to ber. The advent of large supplies of cheap Brazilian coffees in the markets of Europe has, by bringing down prices, no doubt injured the coffee industry of India very seriously; but the following figures of export trade show no mark d change in the position since 1902, except in the last two years:—

	Cwts.
1902-03	269,165
1903-04	291,254
1904-05	329,647
1905-06	360,182
1906-07	228,094
1907-08	244,234
1908-09	302,022
1909-10	232,645
1910-11	272,249
1911-12	241,085
1912-13	267,000
1913-14	260,000
1914-15	290,000
1915-16	177,000
1916-17	198,000
1917-18	196,000

The exports to the United Kingdom have in the last few years fallen off considerably, there has been a great diminution in the trade with France, but exports to other Continental countries have shown some increase. No estimate of the quantity of coffee consumed in India can be given.

The Forests.

The necessity of protecting the vast forest areas in India and Burma was first recognised in the Madras Presidency nearly a century ago, when steps were taken to protect on a limited scale the more valuable areas in the Anamalis, while in December 1886 Doctor Cleghorn was appointed the first Conservator of Forests in that Presidency. It was not, however, until 1856 that Lord Dalhousie laid down a definite policy with the object of affording more widespread protection to the vast areas of valuable forest in British India. The action taken by the Supreme Government came none too soon, for already in many localities the wanton hacking by the local population and even more so by timber contractors, had reduced the forests to a state from which they could not be expected to recover for many years, even under the strictest protection.

Recruitment of the Staff.

In order to introduce a system of conservative management on scientific lines it was of first importance to collect a staff of trained foresters, and as no forest training college existed at that period in England, the Government of India, as a commencement, enlisted the services of three German Forest Officers. The first of these to come to India was the late Sir Detrich Brandis, K.C.I.E., F.R.S. and it was to his extraordinary energy and abilities that a sound foundation was originally laid to the scientific management of the State forests. Soon after his arrival in India, the staff was materially strengthened by the recruitment of officers from the Indian Army. In 1869 the first batch of technically-trained English forest officers joined the service, having received their training either in Germany or France, and this system of continental training remained in force until 1876, after which the training was carried on entirely at the National Forest school of Nancy. The first batch of Coopers Hill trained foresters arrived in India in 1887 and the last in 1907, after which date the training took place at Oxford University, and later also at the Universities of Cambridge, Edinburgh and Dublin. In this way the Government of India have been able to collect by degrees a highly trained staff of men to carry on the administration of their State forests. The total strength of the Imperial Establishment at the present time is 237, of whom 29 are administrative officers and 219 Executive officers, among the latter are included Instructors and Research Officers who are employed at the Forest Research Institute, Dehra Dun.

In order to keep pace with the recruitment of the superior staff, a Forest School was opened in 1878 at Dehra Dun for the training of Forest Rangers. Recently this School has been converted into a College and the instruction expanded to include a course for training men for the Provincial Services. Besides the Forest College at Dehra two new Rangers' Schools have been established, one at Pyinmana in Burma and the other at Coimbatore in Madras. Besides this nearly every Province has established a local Forest School for the training of the lower subordinate establishment.

Area of State Forests.

The forests belonging to the State cover In 1916-17, 246,579 square miles, or rough one-fifth of the whole of India ar Burma. Of this 100,308 square mil are Reserved Forests, 9,140 square miles Pr tected Forests and 137,131 square miles U classed forests, by far the greater portion the latter class occurring in Burma. The di tribution of these areas is by no means unifor the majority being found in Burma, Assa Northern Bengal and along the foot of a extending into the Himalayas from the Nep frontier westward through the United Pr vinces and the Punjab. In the Gangetic valle in the plains of the Punjab, in Sind and R putana few forests occur except along the rive nor does one come across large wooded trac until one enters the Central Provinces and t Godavari catchment area. From there sout ward in the Satpuras and throughout the Nor and South Deccan there exist well distribut areas of forests, though generally not in lar blocks, while on the Western Ghats, in t Nilgiris and Anamalis, are found some of t finest teak forests of India proper. The Ea Coast of India is fairly well stocked with for growth, especially in the Godavari basin, the west of Cuttack and Puri and again in t Sundarbans, while the Andaman Isles densely wooded.

Revenue, Expenditure and Outturn.

The gross Revenue from State forests 1916-17 amounted to Rs. 3,70,61,930, while t expenditure stood at Rs. 1,87,48,883, giving net revenue of Rs. 1,83,18,047. The total ou turn of timber and fuel in that year amount to 306 million cubic feet, The bamboos remov were valued at 14·5 lakhs of rupees, while t total revenue derived from Minor Produ was 124 lakhs of rupees.

From the above figures it will be read understood that not only is the revenue realis by the State considerable but that the har ling of such large amounts of Forest Prod requires a competent staff of officers.

Management.

The system under which the State fore are managed varies in different Provinc In all cases, however, the aim of the For Department has been to introduce Worki Plans for their forests, based on Europe systems of management. The system m usually adopted in India, especially for wo ing the valuable teak and sâl forests, is Selection System, in other words maintaini an equal distribution of all age classes throu out the forest. In a few cases such as in deo and other coniferous forests and also in a instances in sâl forests, the Uniform Meth or a system by which trees of more or l uniform age are grouped together has b applied and the method of mere inte

management may come into more general use in the future, as a greater number of trained officers become available. In many cases, owing to the destruction of the forests in the past, it has only been possible to prescribe Improvement Felling, though in time a more regular system of working will be introduced. The forests which are destined to supply small building timber and fuel to the local population are generally worked by either the Coppice with Standard or Pure Coppice methods, according to the state and composition of the forest, while certain areas have been put aside for the formation of Fuel and Fodder Reserves or as grazing areas.

Forest Surveys.

The preparations of maps for the State Forests is undertaken by the Great Trigonometrical Survey Department. The area for which detailed surveys have been prepared was roughly 84,537 square miles in 1916-17, to which figure yearly additions are being made. As soon as possible after the compilation of detailed maps, Working Plans are prepared for the forest, and up to 1916-17 about 58,588 square miles of Forests have been dealt with.

Method of Extraction.

Once the forests have been organized and plans of working prepared by an officer put on special duty for the purpose, it remains for the executive officers to arrange for the exploitation of the trees, according to the provisions of the sanctioned plans. This work is carried out in various ways in different localities. Sometimes it is done departmentally, as for instance in certain divisions on the West Coast and also in three or four of the western Pegu Yoma divisions, in Burma. This system which had to be adopted by the Department when work was first commenced and contractors could not be obtained, has now generally been replaced by a system of giving leases to work the forests or by selling the annual rupes standing to contractors. In the case of the valuable teak forests of Burma the system of granting leases for a period of from 10 to 20 years has generally been adopted and has been found to work satisfactorily, the fees for felling being marked by the Forest Department. In other provinces this system has been adopted on a more restricted scale, and in India proper the custom of holding annual sales and selling the trees standing has been found more convenient and profitable. The right to collect Minor Produce is generally put up for auction, which gives the highest bidder the right to collect the produce from the forest for a given period, generally one year. In order to meet the requirements of the local population a system of issuing permits is in force, the permit being issued free to right or privilege holders and on payment of a low fee to other persons. This enables agriculturists to obtain their requirements as to fuel, building timber and grass, etc., without delay and without having to pay enhanced fees to a middleman. The right to grazing is dealt with in the same way.

Important Timbers.

The forests of British India contain a vast number of trees and woody plants, in fact a far greater number than is generally realized by the public. For instance the number of tree species is about 2,500, while the number of woody shrubs and climbers is not far short of that total. Of all Indian species of timber teak stands first, both in quality and as to the amount annually exported from the State forests. Sal comes next in importance and is obtained in the greatest quantities from the United Provinces and Nepal, while a very considerable amount is also available from Bengal, the Central Provinces, Assam and the Feudatory States of Orissa. Of other species of nearly equal importance is deodar, the timber of which is extensively used in construction and as railway sleepers; sandalwood, sissoo and blackwood, the last two timbers being highly prized for building purposes and furniture making; the sundri-wood of the Sundarbans and Bassein, used in boat and carriage building; Andaman and Burman Padauk, used for the construction of gun carriages, furniture and railway carriages; the Pyinkado of Burma, used in building and one of the first sleeper woods in the world; the Red Sandars of Madras, babul, the in or eng wood of Burma, all used for building and for a variety of other purposes and Khair from which "Cutch" is obtained. A great variety of other useful timbers could be mentioned of nearly equal importance to the above, which go to supply the requirements of the enormous population of the Indian Empire.

Minor Forest Products.

Turning now to Minor Forest Products, the most important come under the main heads, fibres, and flosses, grasses, distillation products, oil seeds, tan and dyes, gums and resins, rubber, drugs and spices, edible products, bamboos, canes, and animal and miscellaneous products. The number is very large, while some of them are of considerable economic importance, so much so that they realized over 117 lakhs of rupees in 1915-16. It is not possible to do more than to mention one or two of the most important of these commodities, as for instance myrabolams for tanning. Cutch is of even greater importance, being produced chiefly in Burma and the United Provinces though also prepared on a more limited scale elsewhere. Another equally well known product is lac, produced chiefly in Sind and the Central Provinces which besides being used locally, is annually exported in the form of shellac. Of other Minor Forest Products which deserve mention are rosha and lemon oils; gum kino, babul gum, gurjan oil, thitsi damar and rubber, which are classed as exuded products; sabai grass for papermaking and munj grass for fibre and thatching; mohwa seed yielding a valuable oil. sandal and agar wood oil and the essential oils obtained from them; simul floss used for stuffing pillows; kamella powder and lac dye used for dyeing; podophyllum resin, cassia bark, cardamoms, pepper and strychnine, come under the head of drugs and spices; and a variety of other products often of considerable local values.

From what has been said above it will be seen that the Minor Products obtained from the Indian forests play by no means a small part in the economy and commerce of the country.

The statement below relating to **Exports of Forest Products** is taken from the "Annu Return of Statistics relating to Forest Administration in British India" for 1916 17, recent issued:—

Articles of Forest Produce.	Quantity in Tons of 20 cwt. in the case of teak and other timbers, cubic tons.		Valuation at Port of shipment in 1916–17.	
	Average of 5 years 1911-12 to 1915–16.	In 1916-17.	Total.	Per Ton.
Caoutchouc raw	1,268	3,367	Rs. 1,58,16,288	Rs. 4,698
Lac { Button	(a)	(a)	(a)	(a)
Lac { Shell				
Lac { Stick, seed and other kinds ..				
Cutch and Gambier	4,162	3,014	10,62,136	353
Myrabolams	64,247	54,060	61,96,539	115
Cardamums	(a)	(a)	(a)	(a)
Sandal, Ebony and other ornamental woods	(b)	(b)	18,94,784	....
Teak	47,512	25,437	48,00,087	189
Other timbers	5,993	2,787	2,13,903	77

Total in 1916-17	2,99,84,737	....
,, 1915-16	4,79,30,443	....
,, 1914-15	4,17,49,407	....
,, 1913-14	4,54,25,118	....
,, 1912-13	4,67,80,613	....

(*a*) The detailed figures of lac and cardamums are not published in the Seaborne tra accounts of British India, having been temporarily discontinued under orders of Commerce a Industry Department.

(*b*) Quantity (whether by weight or measurement) is not recorded.

FOREST INDUSTRIES.

In a brochure published in 1917 the Government officially reviewed their work and indicated the scope of its development and its potentialities. The most interesting part of this memorandum was that which summarised the development of Indian forest industries. First amongst these was placed the Indian pine resin industry. In this it was stated that from very small beginnings in the United Provinces and later in the Punjab the industry has grown until for the year ending 30th June 1916, the annual resin collection in the United Provinces and the Punjab amounted to 69,980 maunds net (2,592 tons), the operations covering 62,000 acres of forest with 2,141,000 blazes or channels in work giving employment to at least 2,400 operatives. The gross revenue was Rs. 5,04,249, the gross trading account profit Rs. 1,73,892 and the net trading account profit Rs. 1,46,794, while the inve ed capital stood at Rs. 1,61,905. The possi lities of development of the pine industry considerable.

Next in regard to paper it was pointed that the present demand is supplied by the m in India to a small extent. Of the total dema the Indian paper mills produced in norn times about 25,000 tons which during the has risen nearly to 30,000 tons. The impo of paper and paste board in India in 1914 amounted to 51,390 tons valued at £ 709,372 including note paper at a total of £ 879,298. demand for paper in India may therefore be at about 75,000 tons per annum of which In supplies one-third. In the matter of paper p India imports 13,250 tons. The most import raw material used in India is Sabaibhabar or b

grass, which is obtained from the forests of Bengal, Chhota Nagpore, Orissa, Nepal and the United Provinces. The enormous supplies of bamboos and elephant grass available could be utilised for the manufacture of the 50,000 tons of paper and pasteboard which India now imports annually.

Another promising forest industry is matches. The difficulties under which the industry labours is that imported matches are very cheap. Great difficulties had been experienced in obtaining first class indigenous timber within the working figure of cost, railway freight has hit the local trade and the cost of landing the timber at the factory site has in many cases turned out to be excessive. In spite of these difficulties the industry still persists and the solution of the problem in Northern India is found to lie in the erection of portable or semi-portable splint machines in the vicinity of the spruce and silver fir forests and by exporting the prepared splints to central match factories in the plains.

Another promising industry is the antiseptic treatment of timber which has given good results but for its full development requires the establishment of the manufacture of coal tar creosote locally. The following figures show the steady growth of the forest revenue in recent years.

Financial results of Forest Administration in British India from 1864-65 to 1913-14 (in lakhs of rupees).

Quinquennial period.	Gross revenue (average per annum).	Expenditure (average per annum).	Surplus (average per annum).	Percentage of surplus to gross revenue.
	Lakhs	Lakhs	Lakhs	Lakhs.
1864-65 to 1868-69	37.4	23.8	13.6	36.4
1869-70 to 1873-74	56.3	39.3	17.0	30.2
1874-75 to 1878-79	66.6	45.8	20.8	31.2
1879-80 to 1883-84	88.2	56.1	32.1	36.4
1884-85 to 1888-89	116.7	74.3	42.4	36.3
1889-90 to 1893-94	159.5	86.0	73.5	46.1
1894-95 to 1898-99	177.2	98.0	79.2	44.7
1899-1900 to 1903-04	196.6	112.7	83.9	42.7
1904-05 to 1908-09	257.0	141.0	116.0	45.1
1909-10 to 1913-14	296.0	163.7	132.3	44.7

This statement exhibits the striking fact that the surplus has increased nearly ten-fold during the last fifty years, and that it averaged £ 882,000 sterling per annum during the last quinquennial period, without including the large sum represented by the value of forest produce given away free or removed by right holders, which at a rough estimate amounts to over £ 400,000. The increase in the surplus is all the more satisfactory when it is considered that all capital expenditure has been met from revenue and that a considerable proportion of this expenditure is incurred on silvicultural and other operations which as a rule do not show any return for a long period of time.

Area of Forest Lands; Outturn of Produce, and Revenue and Expenditure of Forest Department.

Province.	Area of Province	Forest Area.				Proportion of Forests to whole Area of Province	Outturn of Produce.		Revenue.	Expenditure.	Surplus.
		Reserved Forests.	Protected Forests.	Unclassed State Forests, &c.	Total.		Timber and Fuel.	Minor Produce.			
	Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.	Per cent.	Cub. ft.	£	£	£	£
Bengal	78,875	4,871	1,711	4,030	10,612	13·5	18,867,173	22,313	76,374	39,576	36,798
United Provinces	106,725	5,170	2,288	35	7,493	7	23,866,177	76,883	249,255	171,087	78,168
Punjab	96,650	2,156	4,168	1,472	7,796	8·1	39,341,173	162,636	115,152	61,592	53,560
Burma (including Shan States)	225,048	28,567	..	113,755	142,322	63·2	62,093,838	68,146	646,614	325,749	320,865
Bihar and Orissa	83,122	1,727	1,062	..	2,789	3·4	17,754,630	15,895	34,515	24,103	10,412
Assam	48,915	4,907	..	17,461	22,368	45·7	11,755,581	62,486	70,337	50,348	19,989
Central Provinces and Berar	99,948	19,667	..	..	19,666	19·7	32,827,814	146,191	218,551	115,622	102,928
Coorg	1,582	520	..	..	520	32·9	500,008	1,815	29,944	11,776	18,168
North-West Frontier Province	13,184	236	..	..	236	1·8	3,536,819	2,383	12,454	6,986	5,468
Ajmer-Merwara	2,767	142	..	..	142	5·1	238,843	5,837	1,563	1,677	—114
Baluchistan	54,228	313	..	472	785	1·4	134,427	2,932	1,442	1,866	—424
Andamans	3,143	83	..	2,124	2,207	70·2	1,895,525	229	28,986	28,722	264
Madras	142,261	18,849	..	734	19,583	13·7	23,780,591	129,346	273,789	195,155	78,635
Bombay	123,033	11,998	483	..	12,481	10·1	50,184,778	81,654	313,418	176,136	137,282
Total, 1915–16	1,079,481	99,205	9,712	149,083	249,000	23·1	286,777,341	778,746	*2,074,424	†1,239,507	‡834,917
1914-15	1,079,149	97,580	10,405	141,882	249,867	23·15	270,455,459	717,552	*1,980,652	†1,213,763	766,889
1913–14	1,079,638	96,297	8,390	140,925	245,612	22·7	294,643,323	719,927	2,220,103	1,169,564	1,050,539
1912–13	1,079,163	96,867	8,492	133,564	238,923	22·1	290,718,866	738,978	2,147,321	1,147,187	1,000,134
1911–12	1,071,051	96,148	8,496	138,316	242,960	22·7	257,194,423	708,982	1,937,157	1,129,771	807,386
1910–11	1,071,010	96,387	8,507	138,584	243,478	22·7	260,583,175	635,188	1,827,030	1,016,268	810,762
Totals 1909–10	1,042,718	96,474	8,814	140,263	245,551	23·5	241,132,930	554,095	1,735,053	994,710	740,343
1908–9	1,040,872	94,561	8,835	138,378	241,774	23·2	232,035,865	526,669	1,697,120	981,736	715,384
1907–8	1,040,666	94,059	8,853	134,897	237,809	22·8	234,982,123	551,144	1,724,198	967,528	756,670
1906–7	1,042,477	94,037	9,468	136,633	240,138	23·0	222,146,948	504,419	1,766,099	937,587	828,512
1905–6	1,025,345	92,496	10,018	131,137	233,651	22·8	246,334,840	461,300	1,778,306	950,568	827,738

* Includes £2,030, being the receipt from Imperial and Imperial Forest College and Research Institute.
† Includes £29,112, being the expenditure incurred on account of Imperial, Imperial Forest College and Research Institute and Forest Surveys.
‡ Includes deposit of £27,082 on account of Imperial, Imperial Forest College and Research Institute and Forest Surveys.

RUBBER CULTIVATION.

The most important rubber-yielding tree found growing naturally in the Forests of India is *Ficus elastica*, a very large tree of the outer Himalayas from Nepal eastwards, in Assam, the Khasia Hills and Upper Burma. It has also been cultivated in Assam in the Charduar plantation in the Tezpur Sub-Division, as also in the Kulsi plantation of the Gauhati Sub-Division in the Kamrup Division. There are also a number of other rubber-yielding trees found in the Indian and Burman forests from which rubber can be collected on terms quoted by Government. Attempts have been made to cultivate Para, Ceara and Castilloa in various parts of India and Burma. In India proper the chief attempts were made on the west coast, about 180 acres being planted from 1908 onward at Gersoppa. Similar attempts have been made in Madras: but at present Para rubber is being grown as a commercial product rather in Burma than the rest of India.

The **production of rubber in India** is confined to Assam, Burma, and the Madras Presidency:—

	Acres.	No. of trees.
Assam	4,681	137,430
Madras	12,022	1,636,476
Burma	29,544	4,911,399
Total ..	46,247	6,685,305

The yield of Assam plantations is relatively small, and the number of trees to the acre is much less than in Madras and Burma. The outturn of Madras in 1913 was more than double that of Burma, where most of the trees being less than six years old are not yet productive. All planting is stump planting about 9 to 12 months old. The trees can be tapped in four years from the date of planting. The average yield in Burma from 4 to 6 years old trees is 1½ to 3 lbs. per tree per year. The capital invested is from £22 to £25 per acre. The average cost of production is about 1*s.* 6*d.* to 1*s.* 10½*d.* per lb.

There has been a steady development in the **exports of rubber** from India. The exports in 1917-18 amounted to 8,430,000 lbs., the highest on record, nearly eight times the annual average exports during the pre-war quinquennium. Nearly seven-tenths of the exports went from Madras, and the remainder almost entirely from Burma.

BIBLIOGRAPHY.—For fuller details see "Dictionary of the Economic Products of India" and the abridged edition of the same published in 1908 under the title "The Commercial products of India" by Sir George Watts; and the "Commercial Guide to the Forest Economic Products of India" by R. S. Pearson, published by the Government Press, Calcutta, 1912.

MATCH FACTORIES.

The total **imports of matches** into British India in 1917-18 were over 18 million gross, valued at approximately Rs. 2,34 lakhs. In 1916-17 there was a setback in the imports of matches, 11 million gross being imported against 10 million gross in the previous year. British matches have almost disappeared from the market. Japanese matches are ordinarily of very inferior quality, but they are cheap, and as the Indian is content with a poor quality at a low price, these matches are occupying the market to the exclusion of the more highly priced matches and even to the detriment of the cheap Swedish matches. The percentage shares of the United Kingdom, Japan, and Sweden in the pre-war year were 7·53, and 26 respectively; in 1916-17 the percentages were 4·83, and 13. The development of the trade in recent years is of more than ordinary interest, and the figures in the following table speak for themselves:—

	Twelve months, April to March.			
	1913.	1914.	1915.	1916.
Japan .. .. .. 1,000 gross boxes ..	7,299	7,287	10,478	15,278
Sweden .. .. .. ,, ,, ..	4,226	3,635	2,877	2,321
Norway .. .. .. ,, ,, ..	1,419	865	649	544
Austria-Hungary .. .. ,, ,, ..	1,154	1,377	815	..
Belgium .. .. .. ,, ,, ..	347	307	172	33
Germany .. .. .. ,, ,, ..	351	189	96	7
Straits Settlements (chiefly of Japanese manufacture) ,, ,, ..	248	86	166	96
Other countries .. .. ,, ,, ..	81	148	162	26
Total ..	15,125	13,894	15,415	18,305

In normal years matches are also imported from Austria-Hungary, Germany and Belgium. In the opinion of the Forest experts at Dehra Dun there is an abundance of raw material in this country for match manufacture.

Indian timbers for matches.—In an article in the Indian match industry which appeared in the *Indian Agriculturist* the woods of the following species are said to be employed in Burma for match splints: *Bombax insigne, B. malabaricum* (simul), *Anthocephalus Cadamba* (kadam), *Sarcocephalus cordatus, Spondias mangifera* (amra), and *Engelhardtia spicata* (palash). These woods are not the best for the purpose, but are those most easily procurable. There are other kinds of white wood, such as

poplar, pine, willow, and alder, in abundant quantities, but they are difficult to extract and transport and are therefore costly.

The attempts to manufacture matches in India have not hitherto been attended with great success, but recently two well-equipped factories have been started in Burma which give promise of good results. One of these is in Rangoon and is owned by Chinese; the other is at Mandalay, and is under European management. Further investigations are said to be necessary in order to settle the question as to the most suitable woods to employ, and when these have been brought to a satisfactory conclusion it is thought that Burma will be able to produce matches of first-class quality. It may be added that in 1912, the latest year for which complete statistics are available, there were six match factories in India.

The **Law in India** prohibiting the importation of the old sulphur matches as from July 1st, 1913, has not seriously affected the position of the Swedish manufacturers, as they were able to supply another "strike-anywhere" match to take the place of the kind then prohibited, but as the new kind is dearer to manufacture the prices have gone up, and are likely to rise still further.

PAPER MAKING.

This industry before the war did not make the headway in India that had been anticipated, there being only 11 mills at work now with an authorised capital of Rs. 49½ lakhs, from which the output in 1916-17 was 31,900 tons compared with 26,450 tons, the pre-war quinquennial average. Further increases in outturn are hampered by the inability to secure new machinery and the irregular arrivals of chemicals of which the cost continues steadily to rise.

In India the **effects of the war** were immediately felt in the rise in the price of woodpulp, which is used in considerable quantities by mills. The high cost of imported woodpulp and the increasing price paid for raw materials such as baib grass, the cost of transporting the raw material to the mills, and the temporarily high cost of chemicals are the chief obstacles to the development of the local industry. The position may be greatly improved when the new sources of raw materials are exploited and the products made readily available. The total consumption of paper in India is at present estimated at about 80,000 tons per annum, of which over 30,000 tons are manufactured in India, and the balance (chiefly high class stationery) is imported. The war has been of great advantage to Indian paper mills as it has resulted in curtailing the competition from abroad, and Indian mills have accordingly been able, with the decreased supply for consumption, to raise their prices.

There are five large paper mills in the country working on up-to-date Western lines, *viz.*, at Titagarh, Kankinara and Raniganj in Bengal, the Upper India Couper Mills at Lucknow and the Reay Mill at Poona. There are also two smaller mills at Bombay and Surat which make only country paper, and there are one or two other mills which recently were not working. The five large mills have a large Government connection, as the greater part of Government orders for paper is placed in India.

The existence of the local industry depends chiefly on the supply of Sabai grass which on account of unfavourable seasons sometimes yields short crops. It is of great importance, therefore, to look for materials affording a constant outturn, and various reports have been published on the available paper-making materials. Considerable attention has been devoted to **Bamboo**, since 1875 when it was found that this plant—of which there are four chief varieties in India—yielded a fibrous paper stock which made a quality of paper superior to esparto grass and at a considerably less cost. It was at that time estimated that one acre of bamboo would yield 10 tons of dried stems equivalent to 6 tons of merchantable cellulose. In 1905 Mr. R. W. Sindall was invited by Government to visit Burma with a view of enquiring into the possibility of manufacturing paper pulp. His report on the subject appeared in March 1906. He made numerous experiments with bamboo and woods of Burma and laid down lines along which further enquiry should be made. Subsequently Mr. W. Raitt, a pulp expert, was engaged at the Forest Research Institute in conducting tests on the treatment of bamboos by the soda and sulphate processes, the treatment of bamboo before boiling, with remarks on the utilisation of nodes and internodes. His results were embodied in the "Report on the investigation of Bamboo or Production of Paper-pulp," published in 1911. Mr. R. S. Pearson of the Forest Service, Dehra Dun, as the outcome of enquiries made throughout India published in 1912 a note on the Utilization of Bamboo for the manufacture of Paper-pulp. The yield per acre from bamboo is larger than that of grasses usually used for paper. The cost of working into pulp has been estimated to yield a product cheaper than imported unbleached spruce sulphite and unbleached sabai grass pulp. In 1915 Mr. Dhruva Sumanas published a pamphlet, Dendrocalamus Strictus Bamboo of the Dangs, as the result of investigations carried on in Bansda State.

The leading Indian **paper grass** for the last thirty years has been the bhaib, bhabar, or sabai grass of Northern India. It is a perennial grass plentiful in drier tracts from Chota Nagpur and Rajmahal to Nepal and Garhwal. The Calcutta mills draw their supplies from Sahibganj, Chota Nagpur and the Nepal Terai. The quantity annually exported from Sahibganj is between three to four lakhs of maunds. The cutting in these districts is said to commence in October when the plants are six or seven feet high. Sabai grass yields from 36·6 to 45·5 per cent. of bleached cellulose.

Imported materials.—Paper-making materials, mostly woodpulp, are normally imported to a great extent from the United Kingdom, Austria-Hungary, Sweden, and Germany. Of chemicals the bleaching material, caustic soda, and sulphur or sulphuric acid are imported chiefly from the United Kingdom. Rosin is already being manufactured by the Forest Department in the United Provinces, from crude resin obtained by tapping pine trees in the Himalayan forests, and the product is taken by the paper mills in India.

Mines and Minerals.

Total value of Minerals for which returns of Production are available for the years 1916 and 1917.

Mineral.	1916.	1917.	Increase.	Decrease.	Variation per cent.
	£	£	£	£	
Coal	3,878,564	4,511,645	633,081	....	+16·3
Gold	2,303,023	2,221,889	....	81,134	—3·5
Manganese-ore	1,487,026	1,501,080	14,054	....	+·9
Petroleum	1,119,405	1,092,964	....	26,441	—2·4
Salt	728,358	983,157	254,799	....	+34·9
Saltpetre	607,488	527,666	....	79,822	—13·1
Tungsten-ore	497,397	623,074	125,677	....	+25·3
Lead and Lead-ore	428,383	510,539	82,156	....	+19·1
Mica	311,680	508,173	196,493	....	+63
Building Materials and road metal.	209,334	249,776	40,442	....	+19·3
Silver	88,687	237,216	148,529	....	+167·5
Tin-ore and Tin	39,302	66,533	27,231	....	+69·3
Jade Stone	48,926	67,502	18,576	....	....
Iron-ore	37,981	39,977	1,996	....	+5·2
Monazite	37,714	56,489	18,775	....	+50
Ruby, Sapphire and Spinel.	37,513	51,831	14,318	....	+38·2
Chromite	16,401	26,216	9,815	....	+59·8
Magnesite	14,065	14,559	494	....	+3·5
Alum	6,205	3,707	....	2,498	—40·3
Clay	4,645	9,019	4,374	....	+94·1
Copper-ore	3,259	30,162	26,903	....	+825·5
Corundum	2,783	3,874	1,091	....	+39·2
Steatite	2,628	6,470	3,842	....	+146·2
Graphite	1,501	547	....	954	—63·5
Ochre	941	1,630	689	....	+73·2
Agate	783	255	....	528	—67·5
Bismuth	....	163	163	....	....
Gypsum	745	1,034	289	....	+38·8
Antimony-ore	503	139	....	364	—72·4
Bauxite	463	620	157	....	+33·9
Diamond	361	1,826	1,465	....	+405·8
Molybdenite	202	626	424	....	+209·9
Amber	157	684	527	....	+335·7
Platinum	46	19	....	27	—58·7
Asbestos	....	303	303	....	....
Total	11,916,469	13,351,364	1,626,663	191,768	+12·4
			+1,434,895		

The feature which stands out most prominently in a survey of the mineral industries of India is the fact that until recent years little has been done to develop those minerals which are essential to modern metallurgical and chemical industries, while most striking progress has been made in opening out deposits from which products are obtained suitable for export, or for consumption in the country by what may conveniently be called direct processes. In this respect India of to-day stands in contrast to the India of a century ago. The European chemist armed with cheap supplies of sulphuric acid and alkali, and aided by low sea freights and increased facilities for internal distribution by the spreading network of railways has been enabled to stamp out, in all but remote localities, the once flourishing native manufactures of alum, the various alkaline compounds, blue vitriol, copperas, copper, lead, steel and iron, and seriously to curtail the export trade in nitre and borax. The reaction against that invasion is of recent date. The high quality of the native-made iron, the early anticipation of the processes now employed in Europe for the manufacture of high-class steels, and the artistic products in copper and brass gave the country a prominent position in the ancient metallurgical world, while as a chief source of nitre India held a position of peculiar political importance until, less than forty years ago, the chemical manufacturer of Europe found among his by-products, cheaper and more effective compounds for the manufacture of explosives.

With the spread of railways, the development of manufactures connected with jute, cotton and paper, and the gradually extended use of electricity the demand for metallurgical and chemical products in India has steadily grown. Before long the stage must be reached at which the variety and quantity of products required, but now imported, will satisfy the conditions necessary for the local production of those which can be economically manufactured only for the supply of groups of industries.

Coal.

Most of the coal raised in India comes from the Bengal—Gondwana coal-fields. Outside Bengal the most important mines are those at Singareni in Hyderabad, but there are a number of smaller mines which have been worked at one time or another.

Provincial production of coal during the years 1916 and 1917.

Province.	1916.	1917.
	Tons.	Tons.
Assam	287,315	301,480
Baluchistan	42,163	40,785
Bengal	4,992,376	4,631,571
Bihar and Orissa ..	10,767,683	11,932,419
Burma	200,285	198,407
Central India	287,832	371,498
Central Provinces ..	615,290	680,629
Hyderabad	75	215
North-West Frontier Province	47,449	49,869
Punjab	13,841	6,045
Rajputana (Bikaner) .	....	....
Total ..	17,254,309	18,212,918

The **growth of the Coal Mining Industry** may be roughly gauged from the following table showing the number of Joint-Stock Coal Companies and their total paid-up capital.

	No.	Rs.
1906-07..	66	260 lakhs.
1907-08..	115	432 „
1908-09..	125	658 „
1909-10..	128	731 „
1910-11..	129	721 „
1911-12..	128	722 „
1912-13..	139	716 „
1913-14..	143	725 „
1914-15..	145	744 „

Output in 1917.—There was a large increase in the output in 1917 which was 17,326,384 tons. This is an increase of 907,302 tons or 5.53 per cent. over the output of 1916, the average increase during the previous ten years being 730,641 tons. The increase represents an addition of nearly one million tons in two years. The opening stocks were 697,276 tons, and the closing stocks were 518,838 tons. The despatches amounted to 14,979,190 tons, and the colliery consumption to 1,835,510 tons (10·59 per cent. of the output). The amount of coal delivered to coking was 690,122 tons, from which 190,329 tons of hard coke and 225,120 tons of soft coke were made. This increase was general throughout British India, and only on five of the seventeen coalfields was there failure to respond to it. Amongst these five, however, were the important Raniganj and Girdih coalfields, the other three being small fields. The main increase was in the Jharia coalfield, the output of which was 833,470 tons more than in 1916.

War Conditions.—Of the total output, 16,562,712 tons, or 95·59 per cent. were raised in Bengal and Bihar and Orissa, the percentage of the previous five years being 95·89. It is difficult to draw any comparison between the conditions in these two coalfields in 1917, and those previously existing, as they were to such a large degree influenced, even dominated, by war requirements. All the better coals were requisitioned by Government for military purposes, direct and indirect, at fixed prices and these coals naturally had the benefit of priority as regards transport. The result was that the demand for the non-requisitioned coals exceeded the available supply, and prices for such coals ranged far above the prices of the requisitioned coals, and were abnormally high especially if their inferior quality is taken into

consideration. It may be safely stated that by the end of September there was not a mine in the Jharia coalfield, capable of being worked, which was not being worked, many of them being minute concerns, raising inferior coal which had been closed down for years. The same remarks apply to the Mugma area of the Raniganj field. Of the twenty-five largest concerns in both fields only five showed increases, and some showed considerable decreases, compared with 1916.

The **Output per person** employed was (*a*) below ground 182 tons, and (*b*) above and below ground 113 tons. The figures for the five years preceding were (*a*) 178 and (*b*) 115. Taking each group of coalfields separately, these figures were as follows:—Bengal and Bihar (*a*) 186 and 181, (*b*) 115 and 116; Assam (*a*) 156 and 170, (*b*) 102 and 112; Baluchistan (*a*) 67 and 69, (*b*) 43 and 45; the Central Provinces (*a*) 135 and 120, (*b*) 88 and 82; and the Punjab and North-West-Frontier Province (*a*) 72 and 71, (*b*) 48 and 46. The output in England in 1916 was 323 tons per person employed below ground and 251 tons per person employed above and below ground. The whole question of the output of Indian coal is one of labour. Given a sufficient supply, the output from the existing workings could be increased 50 per cent.

Prices.—The considerable increase in the output in 1915 combined with the lack of seaborne transport resulted in a considerable fall in the pit's mouth value in the chief producing areas, the price falling in the Bengal fields from Rs.3-13-10 per ton in 1914 to Rs. 3-6-2 in 1915, and in Bihar and Orissa from Rs. 3-3-4 to Rs. 2-15-6. In 1917 the average pit's mouth value in Bengal rose to Rs. 3-15-1, and in Bihar and Orissa to Rs. 3-5-10.

IRON ORE.

Bengal and Bihar and Orissa are the only provinces in India in which iron ore is mined for smelting by European methods. Iron smelting, however, was at one time a widespread industry in India and there is hardly a district away from the great alluvial tracts of the Indus, Ganges and Brahmaputra in which slag heaps are not found. The primitive iron smelter finds no difficulty in obtaining sufficient supplies of ore from deposits that no European ironmaster would regard as worth his serious consideration. Early attempts to introduce European processes for the manufacture of pig-iron and steel were recorded in 1830 in the South Arcot District. Since that date various other attempts have been made but none proved a success before that now in operation near Barakar in Bengal. The site of the **Barakar Iron-Works** was originally chosen on account of the proximity of both coal and ore supplies. The outcrop of iron stone shales between the coal-bearing Barakar and Raniganj stages stretches east and west from the works, and for many years the clay ironstone nodules obtainable from this formation formed the only supply of ore used in the blast furnaces. Recently magnetite and hematite have been obtained from the Manbhum and Singhbhum districts, and the production from the last named district has largely replaced the supplies of ore hitherto obtained near the Iron-works. The Bengal Iron and Steel Company, Limited, have now given up the use of ores obtained from the neighbourhood of Barakar and Raniganj and are now obtaining their ores exclusively from the Kolhan Estate, Singhbhum. The deposits are known as Pansira Hill and Buda Hill situated about 12 miles and 8 miles south-east of Manharpur Station, Bengal Nagpur Railway. The total quantity of ore in these two deposits has been estimated to be about 10 millions tons. **The Tata Iron and Steel Company** at Sakchi possesses slightly richer and purer ore-bodies in the Raipur district, supplies of ore are at present drawn from the deposits in Mayurbhanj. The ore-deposits have all been found to take the form of roughly lenticular leads or bodies of hematite, with small proportions of magnetite, in close association with granite on the one hand and granulitic rocks on the other. These latter have been noted in the field as charnockites, the term being employed, rather loosely no doubt, but probably in the main correctly, to cover types of pretty widely varying acidity. In still more intimate association with the ores than either of the foregoing were found masses of dense quartz rocks, frequently banded, and banded quartz-iron-ore rocks. These last are of the types so commonly associated with Indian iron-ores, but are here not so prominent as is usually the case.

There was a slight increase in the **output of iron ore** in 1917. The Tata Iron and Steel Company produced 167,870 tons of pig iron and 114,027 tons of steel including steel rails, while the Bengal Iron and Steel Company produced 80,262 tons of pig and 2,256 tons of cast-iron castings. In the Central Provinces there was a slight increase in the number of indigenous furnaces at work, 312 being operated during the year, but there was a fall in production.

MANGANESE ORE.

This industry commenced some twenty years ago by quarrying the deposits of the Vizagapatam district, and from an output of 674 tons in 1892, the production rose rapidly to 92,008 tons in 1900 when the richer deposits in the Central Provinces were also attacked, and are now yielding a larger quantity of ore than the Vizagapatam mines. India now alternates with Russia as the first manganese-producing country in the world. The most important deposits occur in the Central Provinces, Madras, Central India, and Mysore—the largest supply coming from the Central Provinces. The uses to which the ore is put

are somewhat varied. The peroxide is used by glass manufacturers to destroy the green colour in glass making, and it is also used in porcelain painting and glazing for the brown colour which it yields. The ore is now used in the manufacture of ferromanganese for use in steel manufacture. Since 1904, when the total output was 150,190 tons, the progress of the industry has been remarkable owing to the high prices prevailing. In 1905 production reached 247,427 tons; the following year it was more than doubled (571,495 tons), and in 1907 the figures again rose to 902,291 tons. In 1909, on account of the fall in prices the output contracted to 642,675 tons, but it almost regained its former position in 1910 when the production rose to 800,907 tons. In 1911 it fell to 670,290 tons. In 1916 the output was 645,204 tons valued F.O.B. at Indian Ports at £1,487,026. The ore raised in the Central Provinces is of a very high grade, ranging from 50 to 54 per cent. of the metal, and in consequence of its high quality is able to pay the heavy tax of freight over 500 miles of railway, besides the shipment charges to Europe and America, for the whole of the ore is exported to be used principally in steel manufacture in the United Kingdom, Germany and the United States.

Manganese was one of the minerals which were largely affected by the war, the exports being restricted almost entirely to consignments to the United Kingdom, with a comparatively small quantity to the United States; the quantity produced in 1917 amounted to 590,813 tons valued, f. o. b. at Indian ports, at £1,401,080.

GOLD.

The greater part of the total output of gold in India is derived from the Kolar gold field in Mysore. During the last decade the production of this mine reached its highest point in 1905 when 616,758 ounces were raised. In 1906 the quantity won was 565,208 ounces and this figure fell to 535,085 ounces in 1907. The figures for the latter years reveal a small improvement. The Nizam's mine at Hutti in Hyderabad comes next, but at a respectable distance, to the Kolar gold field. This mine was opened in 1903. The only other mines from which gold was raised were those in the Dharwar district of Bombay and the Anantapur district of Madras. The Dharwar mines gave an output of 2,993 ounces in 1911 but work there ceased in 1912. The Anantapur mines gave their first output of gold during the year 1910, the amount being 2,532 ounces, valued at Rs. 1,51,800. Gold mining was carried on in the North Arcot district of Madras from 1893 till 1900, the highest yield (2,854 ounces) being obtained in the year 1898. The Kyaukpazat mine in Upper Burma was worked until 1903, when the pay chute was lost and the mine closed down. In 1902 dredging operations were started on the Irrawaddy river near Myitkyina, and 216 ounces of gold were obtained in 1904; the amount steadily increased from year to year and reached 8,445 ounces in 1909, but fell to 5,972 ounces in 1910 increasing again to 6,390 ounces in 1911 and being in 1913, only 5,393 ounces. The gold craze, which was prevalent in Rangoon a few years ago, has disappeared as suddenly as it sprang up. The Burma Gold Dredging Company holds a right to dredge for gold in the bed of the Irrawaddy river and notwithstanding the obstacles encountered from time to time in the shape of floods, etc., the company has so far been fairly successful in its operations. The small quantity of gold produced in the Punjab, the Central Provinces, and the United Provinces is obtained by washing. Gold washing is carried on in a great many districts in India, but there is no complete record of the amount obtained in this way. The average earnings of the workers are very small, and the gold thus won is used locally for making jewellery.

Quantity and Value of Gold produced in India during 1916 and 1917.

	1916.		1917.	
	Quantity.	Value.	Quantity.	Value.
Bihar and Orissa—	Ozs.	£	Ozs.	£
Singhbhum	864	3,977	2,462	10,133
Burma—				
Myitkyina	1,901·05	7,289	1,005·55	3,895
Katha	21·21	85	31·19	113
Upper Chindwin	46·96	276	42·18	240
Shwebo	7·41	36	....	....
Salween	6	24	....	....
Hyderabad	18,657·2	71,577	13,466·7	52,013
Madras	22,371	94,789	20,529	87,066
Mysore	554,301	2,124,129	536,559	2,067,541
Punjab	186·23	810	190·08	857
United Provinces	7·63	31	7·31	31
Total	598,369·69	2,303,023	574,293·01	2,21,889

PETROLEUM.

Petroleum is found in India in two distinct areas—one on the east, which includes Assam, Burma, and the islands off the Arakan coast. This belt extends to the productive oil fields of Sumatra, Java, and Borneo. The other area is on the west, and includes the Punjab and Baluchistan the same belt of oil-bearing rocks being continued beyond the borders of British India to Persia. Of these two the eastern area is by far the most important, and the most successful oil fields are found in the Irrawaddy valley. Yennangyaung is the oldest and most developed of these fields. Native wells have been at work here for over 100 years, and in 1886, prior to the annexation of Upper Burma, the output is estimated to have averaged over 2 million gallons a year. Drilling was begun in 1887. The Yenangyat field yielded a very small supply of petroleum before 1891, in which year drilling was started by the Burma Oil Company. Singu now holds the second place among the oil fields of India. Petroleum was struck at the end of 1901, and in 1903, 5 million gallons were obtained. In 1907 and 1908 the production of this field was 43 million gallons, and after a fall to 31½ million gallons in 1910 it rose to 56¼ million gallons in 1912. Several of the islands off the Arakan coasts are known to contain oil deposits but their value is uncertain. About 20,000 gallons were obtained from the eastern Barongo Island near Akyab, and about 37,000 gallons from Ramri Island in the Kyaukpyu district during 1911. Oil was struck at Minbu in 1910, the production for that year being 18,320 gallons which increased to nearly 4 million gallons in 1912. The existence of oil in Assam has been known for many years and an oil spring was struck near Makum in 1867. Nothing more however, was done until 1883, and from that year up till 1902 progress was slow. Since that year the annual production has been between 2½ and 4 million gallons.

On the west, oil springs have been known for many years to exist in the Rawalpindi and other districts in the Punjab. In Baluchistan geological conditions are adverse, and though some small oil springs have been discovered, attempts to develop them have not hitherto been successful.

Quantity and value of Petroleum produced in India during 1916 and 1917:—

	1916.		1917.	
	Quantity.	Value.	Quantity.	Value.
	Gallons.	£	Gallons.	£
Burma—				
Akyab	11,882	228	10,894	210
Kyaukpyu	68,843	321	46,821	1,408
Yenangyaung Field ..	199,152,938	766,562	176,979,020	681,212
Singu Field	85,146,138	305,002	85,639,166	329,635
Yenangyat Field	5,310,740	19,980	6,620,908	24,825
Minbu	2,043,542	8,515	3,468,382	14,452
Thayetmyo	35,000	293	30,000	253
Assam—				
Dibgboi (Lakhimpur) ..	5,236,890	17,274	6,419,840	21,176
Badarpur	....	....	2,924,975	14,625
Punjab—				
Attock	182,480	1,216	618,598	5,155
Mianwali	1,334	14	919	13
TOTAL ..	297,189,787	1,119,405	282,759,523	1,092,964

Imports of **kerosene** decreased largely in 1917, being only a little over 33 million gallons as compared with nearly 60 million gallons in the preceding year. 438,888 cwt. of paraffin wax, valued at £669,479, were exported.

Amber, Graphite and Mica.—Amber is found in very small quantities in Burma, the output for 1917 being 59·6 cwt. valued at £684. Graphite is found in small quantities in various places but little progress has been made in mining except in Travancore. India has for many years been the leading producer of mica, turning out more than half of the world's supply. In 1914, owing to the war, the output was only 38,189 cwts. compared with 43,650 cwts. in 1913. Owing to necessary restrictions with regard to the export of mica, the output fell off considerably in the year 1915, but subsequent demand in the United Kingdom for the best grade of ruby mica led to a considerable increase in production during 1916, the total output being nearly 2,000 tons valued at over £109,000. The amount exported in 1916 was 2,735 tons.

Tin, Copper, Silver and Lead.—The only persistent attempt to mine tin is in Burma. The output was for sometime insignificant but rose in 1913 to 116 tons valued at £46,000 which fell to £38,000 in 1914. In 1917 Burma yielded 13,326 cwt. valued at £65,533. Copper is found in Southern India, in Rajputana, and at various places along the outer Himalayas, but the ore is smelted for the metal alone, no attempt being made to utilize the by-products. The only **lead** mine of any importance being worked in the Indian Empire is that of Bawdwin, where a very large body of high-grade lead-zinc-silver ore has now been blocked out. For many years the smelting operations of the Company were directed to recovering lead and silver from the slags left by the old Chinese miners. Those slags, however, are now practically exhausted, and the mine has reached a stage of development at which a steady output of ore is assured. Nearly 9,000 tons of ore were produced during 1916 as against 4,000 tons in the preceding year. On the other hand, the production of slag fell from 32,534 tons in 1915 to 4,771 tons in 1916. The total output of lead was 13,790 tons, valued at £428,065, and that of silver 759,012 ounces, valued at £88,552.

Silver is obtained as a by-product in the smelting of the lead-zinc ores of Bawdwin. The output from that source during 1917 was 1,580,557 ounces, being an increase of nearly 500,000 ounces over the output of the preceding year. There was also a considerable increase in the Anantapur output which, however, only amounted to 1,362 ounces as against 512 ounces in the preceding year.

Zinc.—A monograph on zinc ores issued by the Imperial Institute in 1917 says that during the past fifty years zinc ores have received but little attention in India, and no production was recorded until 1913. In 1914 the production was 8,553 tons, and although the output fell to 196 tons in 1915, there is a prospect of India becoming an important producer of zinc ore in the future. Important silver-lead-zinc deposits occur at Bawdwin, in Tawngpeng State, one of the Northern Shan States in Upper Burma. The mines are connected with the Mandalay-Lashio Branch of the Burma railway by a narrow-gauge line 51 miles long, the line meeting at Manhpwe, which is about 544 miles from Rangoon. They were worked for many centuries by the Chinese for silver, and have long been known to contain zinc ore; until recently, however, no serious attempt appears to have been made to market the ore for its zinc values. In 1907 the present undertaking was started by the Burma Mines, Ltd., with the idea of recovering the lead from the old slag heaps left by the Chinese, estimated at 125,000 to 160,000 tons, and later to work the deposit. Smelting operations on these slags were first carried out at Mandalay, but later the works were transferred to Namtu, about 13 miles below the mines on the narrow-gauge railway. The deposits, which comprise an area of about 2,500 acres, have now been taken over by the Burma Corporation, Ltd., and one is being worked.

Gem Stones.—The only precious and semi-precious stones at present mined in India are the diamond, ruby, sapphire, spinel, tourmaline, garnet, rock-crystal, agate, cornelian, jadeite and amber. Amber has already been referred to; of the rest only the ruby, sapphire and jadeite attain any considerable value in production and the export of the latter has declined owing to the disturbances in China, which is the chief purchaser of Burmese jadeite. The output of diamonds is comparatively unimportant. The ruby-mining industry of Burma has lately undergone a favourable change. In 1915 the output of gems was 251,000 carats.

Wolfram.—A marked feature of the development of the mineral industries of India during recent years is the rapid rise of the wolfram industry in the districts of Mergui and Tavoy in Lower Burma. Although there was an output of 7 tons from Mergui in 1909, the industry dates practically from the following year, 1910. The output of wolfram in Burma rose from 1,688 tons in 1913 to 4,528 tons in 1917. According to an official note on the mineral production of Burma in 1917, about 80 per cent. of the Burma yield comes from the Tavoy district. Wolfram has lately been discovered on the border between the Yaméthin District and the Loilong State. Since the close of the year 1917 some 20 tons of wolfram have been extracted from a concession in this locality situated to the South of Byingyé peak and numerous other prospecting licenses are being issued in the neighbourhood. Features of the new field are the complete absence of tin and the large percentage of molybdenite which is found with the wolfram. In consequence of the need for wolfram for the manufacture of high-speed steel, special measures were taken by Government to encourage the output. Several of the larger firms in Rangoon were induced to take up wolfram concessions; the shortage in the supply of labour at the mines was met by the importation of Chinese and Indian labourers through Government agency; the Deputy Commissioner, Tavoy, was relieved of his other duties in order that he might give special attention to wolfram mining; and the services of two Geological Officers, a Government Mining Engineer and an Officer of the Chinese Protectorate in the Federated Malay States were lent to the Local Govern-

ment to assist in the control of mining methods and of the labour employed on the mines. On many of the smaller mines and on some of the larger ones, the methods of working still leave much to be desired, but with the introduction of a greater number of firms of standing and with the more efficient control which is now being exercised, there has been a marked improvement both in output and in methods of mining employed.

According to the Director of the Geological Survey, the total production of the world is about 8,000 tons per annum of concentrates carrying from 60 to 70 per cent. of tungstic trioxide. Of this Burma produces one quarter. In Siam the mining of wolfram is a recent development Wolfram is also produced in Australia and in the Malay Peninsula. Formerly, Germany used to take over 50 per cent. of the total exports from India, but this is one of the minerals of which the export was restricted owing to the war.

Quantity and Value of Tungsten-ore produced in India during 1916 and 1917.

	1916.		1917.	
	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£
Bihar and Orissa—				
Singhbhum	8	640	20	1,333
Burma—				
Mergui	528·6	53,566	368	49,541
Southern Shan States	428·1	29,277	307	39,910
Tavoy	2,689·8	366,428	3,697·5	508,794
Thaton	72·7	10,115	107·5	15,366
Central Provinces—				
Nagpur	1·3	220	....	....
Rajputana—				
Marwar	32·7	6,358	42	8,130
Total ..	3,761·2	466,604	4,542	623,074

Radio-active Minerals.—The General Report of the Director of the Geological Survey of India for 1913 includes a brief report by R. C. Burton on an occurrence of pitchblende at mica mines near Singar, Gaya district, Bengal. The pitchblende occurs as rounded nodules in a pegmatite that is intrusive in mica schists. Other minerals occurring in the pegmatite are mica, triplite, ilmenite, tourmaline, and uranium ochre; whitish columbite, zircon, and torbernite have also been recorded. Of these minerals triplite is stated to be the commonest.

The importance of the find of uranium oxide impregnating the triplite led to the discovery of weathered pitchblende, and as the pits were deepened the weathering became less and less until pure pitchblende was obtained. In the six months from July 1913 to February 1914, eight hundredweight of pitchblende was obtained from Abrakhi Hill together with six tons of uranium earth debris, five to six hundred tons of triplite and two tons of tantalite. These ores were raised under a prospecting license in respect of Abrakhi Hill alone and in March 1914, a mining lease for thirty years was obtained in respect of sixty square miles of the Singar estate. The first intention was to work only the five square miles round Abrakhi and a syndicate was formed for this purpose, which on the outbreak of war, was refused a Trading License on account of the German element in it.

Labour in Mines.

The question of the labour supply presents difficulties which are not encountered in countries where mining is a special calling. The majority of the persons working at the Indian coal mines are agriculturists, and the supply of labour, as experience has recently shown, depends to a material extent on the condition of the agricultural industry. "The major portion of those employed," says a report by the Department of Statistics, "are the aboriginal Dravidians from the mountainous country of Chota Nagpur and the Central Provinces, but a large number of other castes is also employed, particularly in the outlying fields. The majority of the workmen follow the vocation of agriculture as well as mining and return to their homes during the period of sowing and reaping, the result being that at such times the output of many of the mines is greatly restricted. At the Makum collieries of the Assam Railway and Trading Company, where the labour question continues to be a very difficult one, nearly a third of the total labour force are Mekranis, Chinese, and Nepalese. The Chinese have, however, proved unsatis-

factory, and it is unlikely that they will in future be recruited." With the increase in the depth of working the need for a skilled mining class will become accentuated, and if the price of coal remains at a sufficiently high level, further development in the introduction of coal-cutting plants may take place. During the period of high prices some nine years ago cutting plants were introduced in order to augment the output. These worked successfully, but the cost proved to be high and as labour conditions improved the machines were discarded.

Inspection of Mines.

During the year 1917 the average number of persons working in and about the mines regulated by the Indian Mines Act was 211,881 of whom 133,042 worked underground and 78,839 on the surface. This is an increase of 13,962 workers or 7·05 per cent. One hundred and thirty-one thousand six hundred and seventy-two were adult males, 72,770 were adult females and 7,439 were children under 12 years of age. Those employed in coal mines numbered 153,683, which is an increase of 10,224 compared with those employed in 1916.

Accidents.—During the year 1917, at mines regulated by the Indian Mines Act, 1901, there were 175 fatal accidents, being an increase of 35 as compared with the number in 1916, and an increase of 5, as compared with the average number of the last five years. These accidents involved the loss of 201 lives, which is a decrease of 5 as compared with 1916. There was no accident causing loss of life on a large scale. In four cases three lives, and in 18 cases two lives were lost.

Of these accidents the Chief Inspector of Mines regards (*a*) 91 as being due to misadventure, (*b*) 46 to the fault of deceased, (*c*) 7 to the fault of fellow workmen, (*d*) 10 to the fault of subordinate officials, and (*e*) 21 to the fault of management. The largest increase was in falls of roof and sides, which numbered 92. This is an increase of 22 over those of the previous year. Fifty-four of them occurred in the coalfields of Bengal and Bihar and Orissa, and in 19 cases they were due to the fault of the deceased. Going through fences to rob pillars caused 9 of such accidents. The method of testing the roof was found to be faulty in more than one case. In two cases persons were killed by the fall of ironstone nodules or boulders in the roof. The next largest increase was in haulage accidents, which were 19 in number as compared with 12 in 1916, and in sundries underground which were 15 as compared with 7. In four cases of haulage accidents, the couplings were found to be faulty. Shaft accidents showed a slight decrease, and surface accidents remained stationary. Shaft accidents in metalliferous mines tend to increase and the condition of such shafts should be a matter for attention by the management. There were three accidents causing deaths from electricity, a decrease of one.

The **death-rate** per thousand persons employed was ·95, while that of the preceding five years was 1·08. At coal mines only, these figures were 1·06, and 1·20, and at mines other than coal ·64 and ·70. At coal mines in England, during the ten years ending with and including 1916, the death-rate per thousand persons employed varied from 1·08 (lowest) to 1·69 (highest). The death-rate per million tons raised at coal mines only was 9·41, while that of the preceding five years was 10·53. At coal mines in England, during the ten years ending with and including 1916, the death-rate per million tons raised varied from 4·31 (lowest) to 6·37 (highest). Of the 201 persons killed, 183 were males and 18 were females.

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CREMATION.

Cremation as a means of disposing of the dead is commonly adopted throughout India by the Hindus, but has been little adopted among the Europeans in India. A crematorium was started some years ago in Calcutta close to the Lower Circular Road Cemetery, at a cost of Rs. 40,000. But the return for this expenditure is disappointing. Only five or six cremations take place in Calcutta each year, in spite of the fact that the fee for cremation has been fixed by the Cremation Society of Bengal at the very low figure of Rs. 30, subject to reductions in the case of poor families. The reason for this is thought to be that, when possible, Europeans go home to die, and the Native Christians and Eurasians are very largely Roman Catholics among whom a prejudice exists against this form of the disposal of the dead. In Bombay arrangements have recently been made for a small area in the Sewri Cemetery to be walled in, and for cremations to be carried on within it in the primitive style of the country, but in such a way as to preserve the ashes.

Industrial Arts.

"The Arts of India," wrote Sir George Birdwood in the first lines of his book on the industrial arts of India which has now become a classic, "are the illustration of the religious life of the Hindus, as that life was already organised in full perfection under the code of Manu, B. C. 900-300." Whether that statement be accepted in its entirety or not, some knowledge of the religion of the Hindus is most essential to an understanding of their arts. That subject is dealt with elsewhere in this book and so is the subject of caste, of which a knowledge is equally important in this connexion. But, by way of preface to a brief outline of some of the more important art industries of the country, it may be well to state what is the basis of practically the whole industrial system of India. The child learns his hereditary craft from his father or is apprenticed to a *mistri*, or master-craftsman, who is often a relative of the pupil. There is no regular fee, but a small present is often paid to the owner or foreman of the shop, and in some trades a religious ceremony may take place at the time of apprenticeship. The child begins his work at a very early age; at first he is expected to undertake the menial duties of the shop and is put to cleaning the tools; later he begins to perform the simplest operations of the trade. There is little definite instruction, but the boy gradually acquires skill by handling the tools and watching the workmen at their task. As soon as he has made a little progress, the apprentice is granted a small wage which is gradually increased as he becomes more useful; and when his training is finished, he either goes out into the world or secures a place on the permanent roll of his master's shop. To the poor artisan the arrangement has this great advantage, that at a very early age the child earns his livelihood and ceases to be a burden on his parents. In former days the system answered well enough for the rude village industries which satisfied the needs of the bulk of the population, and it also succeeded in maintaining a class of workmen who dealt in metals and textile fabrics with such sense of form and colour that their work has challenged comparison with the most artistic products of the West. It has not, however, enabled the Indian artisans to keep abreast with modern industrial development. Imported articles have to a considerable extent supplanted the products of home industry, the quality of Indian work has in many cases deteriorated, and the workman has neither taken due advantage of the wide openings afforded to him by advancing civilisation and trade, nor adhered rigidly to old methods and traditions. The efforts made to assist him have not as yet been attended with a great measure of success, but the potentialities of the Schools of Art and Technical Institutions are only beginning to be appreciated.

Wood-carving.

Indian wood-work, which must come first in importance in the art products of the country, shows great diversity, and many points of interest, and the wood-carvers of the country, have gained a well-deserved reputation outside India. The more noteworthy crafts include carving as applied to architecture; furniture, and cabinet work inlaying with other woods or metals, veneering, and lattice-work. The art and industrial schools of Calcutta, Madras, Bombay and Lahore have given much attention to developing these crafts on indigenous lines, with the result that degeneration has to a large extent been prevented and a superior class of carpenters, dispersed over the country. On a smaller scale, objects are carved in sandal-wood with a minuteness and intricacy of elaboration only equalled by the results attained in ivory. As to style, there is a great variety of types throughout the country, the two chief influences on the art conception being religion and the nature of the wood used. Mahomedan and Sikh work—for example, is largely constructed on a geometric basis, though in the modern Sikh work as in the Hindu—grotesque animal forms or mythological subjects are freely introduced. The woods chiefly used for ornamental work are teak, *shisham*, deodar, sandal-wood, ebony; walnut, *tun*, *nim*, Madras red-wood (sometimes called black-wood), *dudhi* (white-wood), red-cedar, *sal*, *babul*, and others of less importance. Deep under-cutting and sculpture are possibl with teak, red-wood, and walnut; whereas *shisham* and deodar can be used only for low relief work. In recent years a great demand for cheap and inferior carving—on tables and other articles alien to the Indian mind—has sprung up in Europe and America and has been met by the export of vast quantities of poor work, for which the soft woods only are used while bone takes the place of ivory in inlaying. "In these abominations," writes Sir George Watt in the catalogue of the 1903 Exhibition at Delhi, "it is thought sufficient proof of an Indian character to introduce some portion of a mosque or temple, and that being done all attention to such details as suitability of design or nature of ornamentation can be disregarded."

Metal Work.

The purely indigenous or village metal manufactures are perhaps, after those connected with wood, the most important of all the art industries of India. Most of the household utensils are made of metal, which thus to a large extent take the place of the porcelain and glass of Europe. Brass is most frequently employed by Hindus and copper by Mahommedans, the copper vessels being generally tinned for safety. Every large village has its copper and ironsmiths and also its jeweller, and in some instances these local industries attain considerable magnitude, as is the case with the manufacture of copper and brass vessels at Srinagar, Benares and other towns. The making of ornamental bowls, vases, trays, and other European articles constitutes an important industry in many places, and a variety of processes is of course employed such as enamelling; damascening, and colouring either with lac or paint. The provinces of India have each two or three centres noted for their copper or brassware, and there are as many different art conceptions as centres. Some of the styles are well known all over the world, such as the Benares

style of punched brass, which is as a rule bad in design and execution, and the engraved or repoussé work in polished brass that comes in large quantities from Jaipur. Better than either of those are the perforated and repoussé copper work of Lucknow, the best products of Bombay, Poona, and some of the southern India centres, and the gongs and idols made in Burma. Ordinary domestic utensils, which are free from ornamentation so that they can be readily scoured, and the more elaborate implements used for religious ceremonials are among the most and beautiful interesting metal wares in India; but they vary in style and finish throughout the country. Sir George Watt writes:—

"The copper or brass vessel of most general use by the Hindus is the *lota*, a globular melon-shaped vessel flattened from the top and having an elegantly reflexed rim by which it is carried suspended between the fingers and thumb. In shape this doubtless originated from the partially expanded flowers of the sacred lotus, its name thus coming from the same root as the Latin *lotus*, "washed," and the English lotion "a wash". With the Mahomedans the *lota* (or *tonti*) has been given a spout because the Quran ordains that a man shall perform his ablutions in running water, hence the water when poured out of the *tonti* is considered to be running water. It is carried by holding the rim at one side and it thus dangles instead of being (as with the Hindus) suspended from the middle of the hand. The shapes of the *lota* and *tonti* and their respective uses have given birth to two widely different forms of both domestic and decorative metal work characteristic of India. For example, the spout and the use of copper, more especially when tinned, has originated a whole range of forms and designs not only quite unknown to the Hindus but next to impossible with the materials permitted by their religion." It is scarcely possible any longer to divide the gold and silver plate work of India into four or five well defined classes distinguished by the style of ornamentation, as the workers in these metals have been quick to adopt a variety of European models. In Madras mythological medallions, in imitation of the encrusted style of Southern India art, still form the characteristic feature of much of the silver work. In Bombay two distinctive forms survive, the Poona and Kutch: of these the former is a deep form of repoussé, the silver usually being oxidised, the latter has a floral design of European origin in shallow repoussé. Rangoon work is generally known by the frosted surface of the silver and Moulmein work by the silver being either polished or burnished. But in almost every case the design of one province is copied in another, and the best forms of ornamentation, such as the shawl pattern of Kashmir, have fallen into disuse either because of the labour involved in their production or because the smiths have found by experience that it is just as easy to sell inferior work.

Great varieties of form and style are to be seen in the arms and jewellery made in India. Sir George Birdwood in his "Industrial arts of India" says that "the forms of Indian jewellery as well as of gold and silver plate, and the chasings and embossments decorating them, have come down in an unbroken tradition from the Ramayana and Mahabharata." The old types survive side by side with the copies of articles imported from the Rue de la Paix, and in any Indian jeweller's shop a bewildering mixture of the archaic and the modern is to be seen.

Shawl and Carpet Weaving.

It is only in Northern India (more especially in Kashmir) that the spinning and weaving of wool extends to the production of highly-finished and artistic goods. Scattered here and there all over the country are hand-loom factories where coarse blankets, carpets, and other fabrics are produced. This indigenous wool industry is most important in the Punjab. The great centre of shawl production is Kashmir; the industry has also been carried on for many years in parts of the Punjab, where it was introduced by colonies of Kashmir weavers. France was for many years the chief foreign market for Kashmir shawls, and the trade, which was damaged also by the competition of cheap imitations produced at Paisley, never recovered from the effects of the Franco-German War. The bulk of the Kashmir shawl-weavers became carpet-weavers or agriculturists. The latest report from the Punjab regards the case of the genuine shawl industry as "almost hopeless." Carpet-weaving is carried on in various parts of the country. It is one of the many industries which is said to have been ruined by modern civilisation, and in so far as many carpet factories in India are turning out an inferior article, according to designs furnished by dealers in Europe, this is correct. But it is wrong to ascribe the cheapening of the caste weaver's product and his increased output to underselling by those jails in which the weaving of carpets has been introduced as an occupation for prisoners. On the other hand the jails, and especially that at Yerrowda, near Poona, have set a high standard by conserving old designs, by using good material, and by avoiding the use of aniline dyes. Since the London Exhibition of 1851 a considerable export trade in Indian pile carpets has been created. Amritsar, which caters for the American market in particular, is the most important carpet-weaving centre in India, but there are factories in many other places in Northern India, Rajputana, Central India and the United Provinces. In the lower provinces the industry hardly exists. Cotton and woollen carpets in other than pile stitch are made all over India. They are known as *dari* (a rug) and *shatranji* (a carpet) and are made in great variety. The poorer classes of Mahomedans generally use the cotton manufactures as praying carpets.

Apart from woven mats or carpets there is manufactured a great variety of so-called mats made from grass and other materials such as aloe, bamboo, coir, date and other palm leaves. Mats or rather screens (tatties) made of the sweetly scented *Khas-khas* are hung in front of doors; etc., to afford shade and to cool, by evaporation, the air which passes through the moistened texture. Bamboo mats are manufactured here and there all over India, and in Bengal more especially *dama* mats (those constructed of reeds) are also

universally used in house-construction. The traffic in *darma* mats must, therefore, be very great, and give employment to a far larger number of persons than can be learned from published statistics. In some of the jails aloe-fibre mats are produced and find a fair market, while cane mats are not uncommon. These are formed by selected canes being placed parallel to each other and bound in position by cross-ties. They are exceptionally strong, and especially valued in public offices where there is much traffic.

Embroidery.

This is one of the most important of the art industries of India attaining its highest development in Northern India. The stitches employed in the various kinds of work are numerous, but all have this in common that they are formed by the needle being pulled away from and not drawn towards the worker. Mrs. F. A. Steel has written a description of the Punjab darn stitch, known as *pulkhari*, but most of the varieties still await their historian. Darn stitch is chiefly used on coarse cotton and chain stitch on silk or woollen fabrics, the former covering the textile the latter ornamenting parts of it. European demands have led to the production of large quantities of silk embroidery, in which coloured silks and gold and silver wire are employed, for curtains, table cloths and so on. Another common form of embroidery is what is called chikan work on some white washing material such as calico or muslin: in this the most usual form of stitch is the satin stitch combined with a form of button holing. The manufacture of lace and knitting have been introduced into India by missionaries. "Laid" embroidery with gold and silver wire (called *karchob* work because it is done on a frame) is common throughout the country in different forms. The wires are drawn in a number of centres, particularly in Lahore, Delhi, Agra, and Benares: the details of wire drawing and the form of stitch, together with the combination with precious stones and silk, make a great number of classifications of this work possible. A rough division between the two forms is that the massive kind is called *zardozi* and the light and graceful *kamdani*.

Ivory.

The carving and inlaying of ivory are still though perhaps in diminished importance; arts much practised in India. The best material used is African ivory, which is whiter and of closer grain than the Indian, but Sir George Watt has pointed out that the "fish tooth" ivory, or Mammoth ivory of Siberia, is also used by Indian workers. The centres of the craft are Delhi, Murshidabad in Bengal, Mysore, Travancore, and Moulmein. A curious fact about this industry is that, though carving is generally an hereditary occupation; there is no special caste identified with the craft like that of the silver smiths, and this is held to show that the industry as it now exists is of comparatively modern origin. Its development in recent times is due to the desire of sightseers in India to have "something Indian" to take away with them in an easily portable form. But some of the best work is still of great beauty and fine workmanship. The carving of horns and shells may possibly be counted as variations of this art.

Statuary.

Part of that division of handicrafts which is vaguely connoted under the term "fine arts" is the subject of an article elsewhere in this book. Apart from painting, it is not a very considerable division. Statuary, except the wide-spread production of statuettes (in stone, wood, or cast metal) of mythological subjects, is little practised. Various brass workers are expert in reproducing in miniature scenes of Indian life and animals of the country, and at Lucknow some realistic terra cotta statuettes are produced. Wherever wood-carving is practised, and particularly in Burma, statuary in that material is turned out and is used chiefly for decorative purposes.

Fisheries.

The fisheries in Indian waters are unorganised in the modern sense of the term. Vast numbers of the coastal population are through natural circumstances engaged in fishing, but in a great proportion of cases this means of livelihood shares their time with agriculture. The Bengal Government took the important step, a few years ago, in connection with deep sea fishing, of introducing a steam trawler. The undertaking served the purpose of investigation but we have yet to see commercial development on a large scale. Special measures have also been taken by the Madras Government with more or less success, there being in this province a Fishery Department of Government under an Honorary Director. The inland fisheries where there are large rivers or tanks are often important in many parts of India.

Bengal & Bihar & Orissa.

The importance of the Bengal and Bihar and Orissa Fisheries—which are considered together, as they belong to the same geographical region—may be gauged from the fact that rice and fish are the principal foodstuffs of the population and that not less than 80 per cent. of the entire people consume fish as a regular article of diet. As a result, 1·6 per cent. of the population is engaged in catching, curing, and selling fish, a percentage which rises to 2·6 in the Presidency, Rajshahi and Dacca Divisions; moreover, large numbers of cultivators are returned as fishermen also. The waters of the Bay, the rivers, and swamps all contain fish, and every ditch and puddle furnishes small fry to eke out the frugal diet of the people. The best salt-water fish are the bekti, tapsi, or mango-fish, mullet, pomfret, and sole. Inland the hilsa (Clupea lisha) is found in shoals in the Ganges—it migrates up the rivers, from the sea, to spawn, exactly like English Salmon; while the rohu (Labeo rohita) and the katal (Catla buchanani) abound everywhere, as do also innumerable other varieties much esteemed by the Bengalis; prawns and crabs are caught in myriads. The mahseer is found in the higher reaches of the rivers which debouch from the Himalayas, and (according to some reports) in some of the rivers of the Chota Nagpur plateau.

The Bengali is a clever fisherman and the Uriyas and others fish along the foreshore of the Bay of Bengal, drying their catches ashore on stakes driven into some sandy beach. The larger rivers are usually fished by means of enormous nets. The tanks and ditches are periodically dragged, the fish at other times being angled or caught in a cast-net. Every streamlet is studded with hundreds of wicker fish-traps, while prawn cages are ubiquitous. The wonder is that any living fish escapes, so persistent and remorseless is the hunt for the finny tribe. Every other interest is subordinated to its pursuit, and not only is navigation impeded, but the drainage of the country is blocked by the obstruction of every channel and outlet.

Government probably do not own more than 10 per cent. of the entire fishery rights, which have generally been alienated to private persons, having been included in the "assets" on which the permanent settlement of estates was based, but in some cases the fishery itself is a separate "estate." In tanks the right of fishing vests in the owner or occupant who may be some public body or a private individual. In the Bay and in some portions of the Sunderbans fishing is free to all.

Altogether 644,000 persons in Bengal subsist by fishing, or double the number subsisting by pasture. Nor is this to be wondered at, considering the nature of the country and the resources, even though imperfectly developed of its rivers, its estuaries and the sea board. In addition, moreover, to those actively engaged in fishing, there are 324,000 maintained by the sale of fish, so that the total number supported by catching and selling fish is very little under 1 million, or 2 per cent. of the total population. Fishing is in Bengal not considered an honourable reputation, and the ambition of fishing castes is to attain greater respectability by becoming cultivators. As it is, one in every twelve of those whose principal occupation is fishing also cultivates some land in Bengal, and one in six in Bihar and Orissa.

One of the first to turn his attention to scientific study of the fisheries of the Bengal region was Russell, who came out to India (Vizagapatam) in 1781 and acted as Botanist in the Carnatic to the East India Company. A succession of investigators have continued his work and their reports showed that the fisheries offered great scope for profitable development. In particular may be mentioned the great additions to the knowledge of the deep sea fishes in the Bay of Bengal made by Colonel Alcock, I.M.S., Surgeon Naturalist to the Indian Marine Survey and, later, Superintendent of the Indian Museum in Calcutta. After extensive inquiries, he wrote that "the sea fisheries of the Bay of Bengal are of a value well nigh incalculable. That they are unknown, uncared for and unappreciated is unfortunately true; but it is equally true that they will prove a mine of wealth to whoever may have the enterprise to exploit them, and the tenacity of purpose to work them in the face of the apathy and incredulity that at present exists regarding them . . . . I may state that, as Naturalist to the Indian Marine Survey, I have carefully, and I think thoroughly, explored the Bay of Bengal from False Point in the Mahanadi Delta, to Devi Point on the Kistna Delta; and as these explorations have extended over four years, I have had ample opportunity of correcting and verifying all my earlier conclusions." After minutely describing the various kinds of fish available he concluded, "I can only repeat the opinions expressed at the outset that the fisheries of the Bay of Bengal are of inestimable value, and that whoever has enterprise enough to take them up and strength of purpose and length of means to stick to them, will reap a manifold return. The only special question for consideration is that of carriage from sea to market."

In 1906, the Government of Bengal placed Mr. K. G. Gupta, C.S.I., I.C.S. (now Sir K. G. Gupta), a Senior Member of their Board of Revenue, on special duty in order to inquire

o the same subject. He made a compre-
nsive and valuable report from which followed
o important results—(1) His recommen-
dion that a survey should be made of the
ery possibilities in the Bay of Bengal was
mediately acted upon by Government and
ypical steam trawler was set to work in the
y under the direction of Dr. Travis Jenkins,
the Lancashire Sea Fisheries, who was speci-
y engaged for the work; and (2) a Bengal
hery Department was established. Dr.
nkins also specially investigated the fishery
abilities of the Sunderbans.

The results obtained by Dr. Jenkins were
great importance. He showed that traw-
g could be carried on successfully through-
the year, and concluded that a properly
anised scheme for developing the fisheries
uld yield a profitable return on capital
ested. He indicated the lines on which
se fisheries could be exploited.

While the sea fisheries of Bengal were thus
estigated great industry was shown in the
lection of information, in experimental
rk and in the initiation of breeding operations
scientific lines, in regard to the fresh water
eries, in both rivers and tanks. The fre-
nt overflowing of the great rivers in the
ns and the necessity for studying the habits
the river fish added greatly to the work
ler this heading. The erection of weirs
l the various irrigation schemes initiated
both provinces have also often wrought
oc with the fishery outlook.

The Fishery Department, after following
Dr. Jenkins' investigations, regard the Sun-
bans fisheries as capable of furnishing yearly
far short of 200,000 maunds of fresh fish,
le they point out that the area covered
the potential marine fisheries having been
wn to be roughly 39,000 square miles, the
ply from such a vast area must be well
inexhaustible. "From statistics which
e been carefully compiled it has further
n ascertained that the annual imports
fish to Calcutta from all sources roughly
resent 30 per cent. of the actual require-
nts."

The future development of the fisheries
commercial lines will not only require some
lay of capital, but will also necessitate
le advance in the general conditions and
ital lot of the fishermen, because the low
em in which the occupation of fishing
the dealing in fish is held has led to the
ole industry being left in the hands of people
h no capital, no education, no initiative
no business capacity. The most hopeful
is officially stated to be the prospect of
spread of co-operative credit societies
ongst fishermen in the near future. The
ation is obviously one in which there is
ole scope for a development of this kind.
unwhile the Fisheries Department are carry-
on persistent, careful and extensive pro-
anda work. As regards actual fishing,
Department are dividing their concentration
two points—(1) the possibility of increasing
actual number of fish present, and (2) the
sibility of capturing a larger proportion
existing fish without exhausting the natural
ply.

A problem at the present time is the absence of fishery laws in Bengal. The Fishery Department point out that as some legislation has been found necessary in every other civilised country, in order to protect both fish and the community against the rapacity of man, it may be assumed that sooner or later legislation will be found necessary in Bengal. "At present we know so little regarding the habits of the commoner marketable fish, that we have not sufficient data on which to formulate any extensive Fishery Laws. The results of the scientific enquiries . . . . . will enable us first to determine whether legislation is necessary or not, and then to define the nature and object of any laws desired."

The Fishery Department was two years ago separated from that of Agriculture and a separate Director of Fisheries appointed. The scientific investigations conducted by the Department have been extended considerably during the last year or so it being recognised that such investigations form the foundation on which all future progress of any lasting character must depend. A considerable number of scientific papers have been published in the Records of the Indian Museum and the list is being added to from time to time. These papers deal with a variety of subjects such as fish diseases and parasites, life histories of the principal edible species, etc. etc. The life histories of the principal fresh water shells (used in the manufacture of pearl buttons) are also being investigated. In addition, eleven Fishery Bulletins have been issued during the last 5 years. These Bulletins cover a wide range of subjects including statistics of the fish trade in Bengal, simple instructions to fishermen, general review of the fisheries situation in the provinces, etc. etc.

Necessity of organising Trade.—The manner in which trade in fish is organised and conducted in Bengal is quite unsatisfactory. Practically the whole of the Calcutta trade is in the hands of a few persons who are sufficiently powerful to overcome the rivalry of any other competitors. Any outsider starting a business is sure to be undersold and boycotted by these "fish kings" who have agents every where throughout the province. These agents make advances to the fishermen on condition that they repay in fish, the value of which is determined by the agent. As a rule, the fishermen are in debt to the agent and for this reason alone they are unable to sell their catches freely in the market. The result is that the fishermen class who catch the fish, are almost invariably poor, whilst a few middlemen enjoy the entire profit. Looked at broadly the improvement of the fisheries involves the solution of two main problems, *viz.*, (1) to increase the number of fish available, and (2) to organise the trade in fish and this includes the questions of co-operation and banking. For this reason very great attention is being given to the formation of fishermen's societies for taking out leases of Government fisheries direct from Government and to release the fishermen from the clutches of the Zamindars as well as mahajans.

Statistics of fish imported into Calcutta are collected annually and arrangements have been made by the principal railway companies to provide special cold storage vans for the carriage

of fish. This will be of great value to the fish merchants as it practically dispenses with the necessity for ice.

Subsidiary Industries.—Attention is also being given so far as the existing staff of the department permits, to stimulating industries in the by-products of fish and other aquatic animals. At one time a large number of people in Dacca and adjoining districts earned their livelihood by manufacturing ornaments from pearl mussels and chank shells, but recently the industry has deteriorated owing to the inadequate supply of raw materials. As the industry is of a very important character, efforts are being made (although much little success as yet) to enable the Dacca manufacturers to purchase shells direct from Government through a Co-operative Society. Steps are also being taken to increase the supply of pearl mussels. Of the by-products of fish, fish oil and fish manure are highly important and if properly manufactured and placed on the market in sufficient quantities would surely prove lucrative to those engaged in the trade. It has been ascertained that about 500 maunds of fish oil are manufactured in Bengal every month, but samples examined were found to be rancid, even after filtration. They also contained a large proportion of free fatty acid. The question of refining this oil has to be considered. Manures prepared from fish refuse would be highly useful for the cultivation of certain crops and if these can be placed in the market at a cheap rate, would repay in the increased outturn of those crops. These industries however depend on the opening out of the marine fisheries.

Steps are also being taken to place salted and smoked fish on the market with the object of testing the demand.

Burma.

The fisheries of Burma are important financially and otherwise. From time immemorial the exclusive right of fishing in certain classes of inland waters has belonged to the Government, and this right has been perpetuated in various fishery enactments, the latest of which is the Burma Fisheries Act of 1905. Fishing is also carried on along the coast, but the sea fisheries absorb but a small portion of industry. Most of the fishermen labour in the streams and pools, which abound particularly in the Delta Districts. The right to work these fisheries, mentioned in the enactments alluded to above, is usually sold at auction, and productive inland waters of this kind often fetch very considerable sums. River fishing is largely carried on by means of nets, and generally yields revenue in the shape of licence fees for each net or other fishing implement used. Here and there along the coast are turtle banks which yield a profit to Government. In the extreme south the waters of the Mergui Archipelago afford a rich harvest of fish and prawns, mother-of-pearl shells and their substitutes, green snails and trochas, shark-fins, fish-maws, and beche-de-mer. Pearling with diving apparatus was introduced by Australians with Filipino and Japanese divers in 1893. They worked mainly for the shell, it being impossible for them to keep effective check on the divers as regards pearls. After about five years, when yield of shell had decreased, they all left. industry was then carried on by the Burm

Bombay.

The Bombay sea fisheries are import and give employment to numerous cas chief of which are the Kolis. Pomfret, s stone, and lady-fish are sold fresh, while oth such as the bombil, are salted and dried. La quantities of small fry are sold as manu The palla, found in the Indus, and the ma and mahseer are the principal fresh-wa fish.

Sea-fishing is carried on by the Muh tribe of Musalmans, who reside for the m part in hamlets near Karachi. The princ fish caught on the coast are sharks, rays, s skates. The pearl oyster is found at seve places, and the Mirs conducted pearl op tions on their own account. Under Brit rule, the right has been let for a small su but the pearls are very inferior in size a quality, so that the industry has greatly clined during the last thirty years. At pres practically no pearl fishing is carried on. C siderable fisheries also exist in the river Ind chiefly for the fish known as palla, which annually leased out by Government for ab Rs. 20,000.

But for a province with such a length of board and with the estuary of the Indus wit its borders the fishing population is singula small. The fishing boats and applian generally are very small and the fishermen not go out in rough weather. The best fish season is the cold weather months of Decemb January and February, and it is probable t with such a very brief season the harvest the sea is not sufficient to support a lar population. The fishing castes frequen desert their caste occupation for others, acco ing to the 1911 census report. When the t groups, fishermen and fish dealers, are amal mated there is a decrease of 9,000 in the agg gate, which can only be explained by th deserting their ancestral occupation.

The Government of Baroda, a State lyi within the borders of the Bombay Presiden being desirous of introducing oyster cult into the coast districts of their State, ha delegated a student to Pulicat, where t Madras Fisheries Department are engaged similar work, and he is receiving practi instruction.

Madras.

The Madras irrigation tanks usually co tain coarse fish, the right of netting which disposed of annually. The sea-fisher along the coast employ thousands of perso and the salting of the catches is a very co siderable industry. The development of t fisheries of the Presidency is now under vestigation by Government. Fish-curing carried on in special yards under Governme supervision, and is an important industry.

)ther important departments of the work lude canning, soap making, stocking of ks, trout culture in the Nilgiri streams, servancy in various inland waters, edible l pearl oyster culture and fishing, deep sea erimental fishing of the West Coast, with ch attendant research and instructional rk of a scientific character.

he war, with its consequent special demands l its interference with sea freight, navigation, our, recruitment and the transit of mechanical llances from England has seriously ham- ed the development of the operations carried under the direction of the department.

The Punjab.

Punjab Fisheries Department came into ng as an experimental measure in 1912, received the official sanction of Government a regular Department of the Punjab in April 6. It operates under a Warden of Fisheries, njab, under control of the Financial Com- sioner

he first three years, under the Director of eries, Punjab, the Department was almost rely concerned with preliminary work, isting largely of investigations and experi- its in the Beas and Ravi Rivers. These ers were exploited with a view to ascertain- the indigenous species which inhabited n, their habits, spawning grounds and other which would enable Government to frame regulations for their protection. The various fishing communities were interviewed and their views and statements carefully considered as to their rights in Government waters. From the mass of evidence collated the Director drafted rules for the Kangra District, which while conserving the fish supply and being a source of revenue to Government would be acceptable to the people of the District.

The rules came into force in July 1916 and appear to be working smoothly and satisfactorily.

Regulations on the same lines but based on local conditions have since been drafted and submitted to Government for approval for the following Districts:—Hoshiapur, Gurdaspur, Jullundar, Ludhiana and Amritsar, and the Kapurthala State. Those for Jullundar and Amritsar have been approved and became law. The others are still under consideration.

Trout cultural operations still continue to flourish. Good sport is enjoyed by anglers in the Kullu Valley and during 1918 ova were brought into Kangra and planted in a couple of streams within 50 miles of Dharmsala.

A large percentage hatched out and another large consignment will be sent in during the winter 1918-1919 and the experiment watched with much interest If successful, it is hoped that many of the streams in the Kangra District will be stocked with trout in the near future and anglers in Lahore be able to obtain trout fishing within a 12 hours' journey.

The Opium Trade.

Two descriptions of opium must be distinguished. *Bengal* opium which is manufactured from poppy grown in the United Provinces; and *Malwa* opium which is almost entirely produced in certain Native States in Central India and Rajputana.

Bengal Opium.—Cultivation of poppy is only permitted under license. The cultivator to whom advances are made by Government free of interest is required to sell the whole of his production to the Opium Factory at Ghazipur at a rate fixed by Government, now Rs. 7/8 per seer of 70° consistency. The area licensed for cultivation has in recent years been much reduced as a consequence of the agreement between the Government of India and the Chinese Government, and is now restricted to the United Provinces. The following are the figures of the area under cultivation and of production :—

—	*Average under cultivation.*	*Maunds of opium produced.*	*Number of chests made.*
1911–12	200,672	31,473	23,126
1910–11	362,868	44,926	23,611
1909–10	354,577	67,666	36,172
1908– 9	361,832	61,803	33,895
1907– 8	488,548	71,340	51,230

At the Factory two classes of opium are manufactured :

(1) "Provision" opium intended for export to foreign countries. This opium is made up in balls or cakes, each weighing 3·5 lbs., 70 cakes weighing 140½ lbs. being packed in a chest.

(2) "Excise" opium intended for consumption in British India. This is made up in cubic packets, each weighing one seer, 60 packets being packed in one chest. It is of higher consistency than "provision" opium.

"Provision" opium is sold by public auction in Calcutta, the quantity to be sold being fixed by Government. This quantity has been reduced in recent years in accordance with the agreement with China, the figures being 15,440 chests in 1911 and 6,700 chests in 1912. Exports to China have been stopped altogether since 1913.

Statistics of Trade.

The difference between the cost of manufacture and the price realised at these sales may be regarded as the duty levied by Government :—

—	*Number of chests sold.*	*Average price realised at auction sales per chest.*	*Average cost of manufacture per chest.*
			Rs.
1911–12	26,330	2,790	*
1910–11	37,560	2,890	525
1909–10	42,300	1,612	515
1908– 9	45,900	1,383	525
1907– 8	48,900	1,350	503

Malwa Opium.—The poppy from wh Malwa opium is manufactured is grown chi in the Native States of Indore, Gwalior, Bho Jaora, Dhar, Rutlam, Mewar and Kotah. British Government has no concern with cultivation of the poppy, or the manufact of the opium: but it used to regulate, be exports to China were stopped, under the tem explained below, the import of Malwa op into, and the transport through, its territor As the chief market for Malwa opium was Ch and as the States in which the drug is produ had no access to the sea, except through tish territory, the British Government were to impose a duty on the importation of the d on its way to Bombay for exportation by

No statistics of cultivation or produc are available. The poppy is sown in Novem the plants flower in February, and by the of March the whole of the opium has been lected by the cultivators who sell the opium to the village bankers. It is then bou up by the large dealers who make it up balls of about twelve ounces and store it u it is ready for export, usually in Septem or October. The opium is of 90° to 95° c sistency and is packed in half chests: siderable dryage took place in the case of opium while transported to Bombay.

To enable Malwa opium to reach Bomba pass from the Opium Agent, or his Deput was required. This pass was not granted u the duty imposed by the Government of In had been paid. This duty was until 1912 the rate of Rs. 600 per chest: but was rai to Rs. 1,200 in that year consequent on introduction of a system similar to that ap cable to Bengal opium. Under this syst the Collector of Customs, Bombay, sold right of exporting opium to the highest bid at monthly auction sales. On payment the price bid and of duty at the enhanced r the bidder was given a certificate autho ing him to import opium from Malwa. T number of chests fixed for export in ye r 1913 was 14,860. But out of these o 2,755 were exported during the year owing the large accumulation of stocks in Ch markets. Sales of Malwa opium for export that country have ceased since January 1 and the trade has become extinct since 1 December of that year when the last shipm was made.

Practically the whole of the Malwa opi exported from Bombay went to China. Th is no market for it in the Straits Settlemen A few chests annually are shipped to Zanzib

Revenue—The revenue derived by the G ernment of India from opium in recent ye is as follows :—

	£
1914–15	654,0
1915–16	1,144,3
1916–17	912,3
1917–18	1,115,2
1918–19 (Budget Estimate) ..	1,254,3

* Figures not available.

greement with China.—The fluctuations ne revenue derived from opium are directly butable to the trade conditions arising of the limitation of opium exports. 1907 being satisfied of the genuineness the efforts of the Chinese Government to ress the habit of consuming opium in a, the Government of India agreed to perate by gradually restricting the amount pium exported from India to China. In an arrangement was concluded by which otal quantity of opium exported from India to be reduced annually by 5,100 chests from ssumed standard of 67,000 chests. Under a ier agreement, signed in May 1911, the ition of the trade was to be accelerated on ence being shown of the suppression of the re production of opium in China, and in rdance with this agreement a further limi- n was placed on exports to Chinese ports. reduction of exports led to an increase in rice of the drug in China and a correspond- rise in the price obtained in India at the on sales. For some considerable time, however, in 1912 the trade in China was paralysed by the imposition by Provincial Governors in defiance of instructions from the Central Government of restrictions on the importation and sale of Indian opium. Stocks accumulated rapidly at Shanghai and Hongkong and the position in December 1912 had become so acute that a strong and influential demand was made on the Government of India to relieve the situation by the suspension of sales. Sales were accordingly postponed both of Bengal and Malwa opium and in order to afford the Malwa trade the most complete relief, the Government of India undertook to purchase for its own use 11,253 chests of Malwa opium which remained to be exported in 1913. The present position is that the export trade to China has ceased since 1913. The exports of opium on private account amounted in 1917-18 to 12,000 cwts. valued at Rs. 240 lakhs. The importing countries, in order of importance, were Indo-China, Java, Siam, Japan, Hongkong and Straits Settlements.

GLASS AND GLASSWARE.

e total value of glass and glassware import- ito India in 1917-18 was Rs. 162 lakhs, ared with Rs. 150 lakhs in the preceding and Rs. 161 lakhs, the annual average ve years up to 1913-14. Austria-Hungary Germany, before the outbreak of war, rted bangles, beads, bottles, funnels, globes, to the value of Rs. 116 lakhs in 1913-14. value of the average imports from the y countries during the five pre-war years Rs. 93 lakhs or about 57 per cent of the . With their disappearance from the in market, imports from Japan have in- ed to 71 per c nt. from 8 per cent., the pre- average. The United Kingdom increased hipments of sheet and plate glass, which e 1914 came largely from Belgium.

ass manufacture in India consists of vell-defined classes, the indigenous house- industry and the modern factory industry. indigenous household industry, which is sented in all parts of the country, is chiefly rned with the manufacture of cheap les. Glass manufacture in India on the rn factory system has hitherto been an l struggle against great difficulties. In Ben- he Pioneer Glass Manufacturing Company, ted, of Titagarh, started work in 1890 the Bengal Glass Company of Sode- n 1898. They ceased working in 1899 1902, respectively. The Madras Glass s founded in 1909 has ceased work, though hoped to restart it. A factory started in rabad also proved a failure and its plant aken over by the Glass Works at Ambala. Himalayan Glass Works at Rajpur in the a Dun district closed after three or four years' working in 1908, but was restarted later under new management. Finally, the Upper India Glass Works at Ambala which was started by Indian capitalists in 1895, was at first a failure. Since 1903, however, it has been much more successful. It established itself firmly in its earlier years by specialising in the manufacture of bangle glass; and in this line it is interesting to record that the bangle glass of Ambala and Firozabad has succeeded in capturing the market, whereas formerly large quantities of glass used to be imported from Belgium for this purpose.

During the past year or two, a number of Glass Works have been opened in the Bombay Presidency and adjoining districts, local manufacture having been stimulated by the cessation of imports of German, Austrian and Belgian Glass. In Bombay City itself there are three factories, the Bombay Glass Manufacturing Company, the Indian Glass Manufacturng Company, Ebrahim Peer Mahomed and Company (Glass Manufacturers), and elsewhere in the Presidency other important Works include the Western India Glass Works, Sunth Road; the Swadeshi Glass Manufacturing Company, Limited, Piplod; the Baroda Glass Works, Baroda; the Paisa Fund Glass Works, Talegaon; the Ogale Glass Works, Karad. In addition, the Kotah State has erected a factory at Baran for the production of Glass for Bangles. Jubbulpore also has an important Glass Factory.

Records of the earlier ventures have shown that the failures in some cases were due, in part at least to preventible causes, prominent among which were (1) the lack of sufficient fluid capital and the consequence inability of the companies to meet their heavy initial expenses

and (2) inexperience and lack of technical knowledge on the part of promoters. But there are also certain real and special difficulties which glass manufacturers in India have to contend against.

The principal present difficulties are :—

(1) The difficulty of obtaining skilled labour for glass blowing. This difficulty should be overcome in course of time, as there are now a few experienced Indian Blowers. (2) The heavy cost of fuel, the works usually being situated where good sand and quartz can be obtained, and consequently, in most cases at a g distance from the coal fields. (3) Competi from Japan.

The Alkali used is almost entirely of Eng manufacture, being Carbonate of Soda 98–9 in a powdered form. This Alkali has alm completely taken the place of the vari Alkaline Earths formerly employed by Glass Bangle manufacturers, as the latter c not be used in the manufacture of glass wh is to compete with the imported article.

WILD BIRDS' PLUMAGE.

The Bill for prohibiting the importation into England of wild birds' plumage, which was introduced into Parliament in 1913, was the occasion of a fierce controversy on the nature of the plumage traffic. But organised opposition to the Bill failed to convince the public that the plumage trade was not one of great cruelty. Among well-authenticated cases from India that prove its cruelty was one from Karachi, in 1913, in which two men were fined for sewing up the eyes of birds so that they should not fight in their cages. It was stated that this was a common practice of fishermen in Sind, who breed birds and export their feathers to England. This according to *The Times*, is not only another apparent example of the way in which the prohibition on the export of plumage from India is notoriously evaded by smuggling into the open market of England, but shows how easily abuses might arise under any system which gave a general sanction to feather-farming. All legitimate methods of breeding birds for their plumage can be safeguarded as definite exceptions under an Act prohibiting importation; and only the exclusion by law of all plumage not so specified can put England abreast of the United States and of her own daughter Dominions in the suppression of a barbarous industry.

Plumage birds.—The birds most killed on account of their plumage in India are paddy birds, kingfishers, bustards, junglefowl, egrets, pheasants, paroquets, peafowl, and hoopoes. Perhaps the most extensively killed in the past has been the Blue Jay (Coracias Indica). The smaller Egret is met with throughout India and Northern Burma. It is a pure white slim heron which develops during the breeding season a dorsal train of feathers, which elongates and becomes "decomposed" as it is expressed, that is to say, the barbs are separate and distinct from each other, thus forming the ornamental plume or aigrette for which these birds are much sought after and ruthlessly destroyed. Thirty years ago the exports were valued at over six lakhs in one year, but since 1895 the export trade has steadily diminished. But, though legitimate exports have been stopped, the trade is so lucrative as to lead to many attempts at smuggling. Within a recent period of 12 months the Bombay Preventive Department, for example, seized egret plumes worth Rs. 2,19,047 in India and £44,000 in London. The rupee value represents the sum which the exporters paid to those who took the feathers from the birds, so the loss to the trade was considerable. In addition, penalties varying from Rs. 5,000 to Rs. 10,000 each and amounting altogether to Rs. 59, were inflicted on the ten merchants concer in attempting to export the feathers. A c was reported from Rangoon in 1916 of a r being found in possession of 22 lbs. of e feathers valued at Rs. 66,000.

Legislation.—Indian legislation on subject will be studied with interest by th who have followed the course of legislation this subject in other countries. Until 1887 legislation was considered necessary in In An Act of that year enabled local governme and municipal and cantonment authorities make rules prohibiting under penalties the s or possession of wild birds recently killed taken during their breeding seasons, and importation into any municipal or cantonm area of the plumage of any wild birds dur those seasons; and local governments w empowered to apply these provisions to anim other than birds.

Afterwards, in 1902, action was taken un the Sea Customs Act to prohibit the exportat of the skins and feathers of birds, except feath of ostriches and skins and feathers expor *bona fide* as specimens illustrative of natural h tory. Act VIII of 1912 goes much further th the previous law. It schedules a list of w birds and animals to which the Act is to ap in the first instance, enables local governme to extend this list, empowers local governme to establish "close times," presumably duri the breeding seasons, in the whole of th territories or in specified areas, for wild bi and animals to which the Act applies, a imposes penalties for the capture, sale, a purchase of birds and animals in contraventi of the "close time" regulations, and for t sale, purchase and possession of plumage tak from birds during the close time. There power to grant exemptions in the interests scientific research, and there are savings f the capture or killing by any person of a wi animal in defence of himself or of any oth person, and for the capture or killing of a wild bird or animal in *bona fide* defence property.

One defect in the law may be noticed. Wh an exporter is discovered, the Customs Depa ment can on a magistrate's warrant have h house searched and seize the feathers fou there to produce as evidence that he is engag in the trade. But they have to return t feathers and can only take possession of the if they are discovered presently in course export.

BREWERIES.

Statistics compiled from official returns show at there were, in 1912, 22 **breweries** in itish India, of which one did not work during e year. Fifteen of these are private property d seven are owned by six joint-stock compan- with a nominal capital of Rs. 26,71,000, of ich Rs. 22,26,260 was paid up at the end of 12-13. Eight of the breweries are located stations in the Himalayas from Murree to rjeeling. The largest brewery is the one at rree, the Bangalore, Solon, Rawalpindi, sauli, Poona, and Mandalay, breweries nding next in the order shown. **Production** s largest in 1902, since when it has tended to cline. In 1917 the production was 6,217,000 llons, an increase of 52 per cent. as compared with that of the previous year.

A substantial quantity of beer produced locally is consumed by the British troops in India. In 1907 the Army Commissariat purchased some 38 per cent. of the total production and the average purchases in the five years 1903-1907 amounted to 2,633,616 gallons yearly. From the 1st January, 1908, the contracts with Indian breweries for the supply of malt liquor to British troops have been discontinued, each British regiment being left free to make its own arrangements to obtain the necessary supply; as a result, the figures of Army consumption are no longer readily available.

GRAIN ELEVATORS.

The question of adopting elevators for the ndling of Indian grain has engaged attention some time and has assumed increased im- rtance in the light of the railway congestion perienced in recent years and more parti- larly in the grain season. In the last three rs great strides have been made by other ntries in the adoption or perfecting of the vator system, and a large mass of contem- rary data on the subject has been brought ether by the Commercial Intelligence De- rtment. Since the subject is one that can- receive adequate consideration in India the facts are before the public, these have n embodied in a pamphlet entitled *Indian eat and Grain Elevators*, by the late Mr. F. el-Paton, Director General of Commercial elligence to the Government of India. The rk gives full particulars regarding India's duction of wheat, and shows that less than -eighth of the crop is exported. It des- bes the conditions under which the grain eld and the risks that it runs. It is pointed out that the cultivator has no adequate mean of preserving his wheat and that he is constrained to sell at harvest time: also that the prices then obtained by him are considerably lower than those usually current in later months. The constant nature of the European demand is explained and an attempt is made to gauge the probability that the enormously increased quantities of wheat to be expected when new irrigation tracts come into bearing would be accepted by Europe at one time and at a good price, or could be economically transported under a system in which a few months of congestion alternated with a longer period of stagnation. Figures are given which suggest that in practice the effect of equipping railways to do this is to intensify the evil and so to engage in a vicious circle. The author explains the structural nature of elevators and their functions as constituted in other countries. Particulars are given as to the laws that govern their operations in such countries.

TRADE MARKS.

The **Indian Merchandise Marks Act** of 1889) was passed in 1889, but its operation the earlier years was restricted, especially in lcutta, in consequence of the lack of adequate stoms machinery for the examination of ds. In 1894, with the introduction of the sent tariff, the Customs staff was strengthened the examination of goods for assessment to y, and this increase enabled examination be made at the same time for the purposes the Merchandise Marks Act. The Act was ended originally to prevent the fraudulent e of goods bearing false trade marks or false de descriptions (as of origin, quality, weight, quantity). While the Act was before the gislature a provision was added to require t all piece-goods should be stamped with ir length in yards. In this respect these ds are an exception, for the Act does not uire that other descriptions of goods should stamped or marked, though it requires that en goods are marked the marks must be a rect description. **The number of detentions** under the Act during the twenty year ending 1912-13 has been:—

| Average of the five years ending | | |

HIDES, SKINS AND LEATHER.

India's local manufactures of skins and leather have steadily increased in recent years. Previous to the outbreak of war, the trade in raw hides in this country was good; there was a large demand for hides, and prices ruled high. While in the continental markets stocks were high owing to overtrading in the previous year, the United States had a shortage which was estimated at approximately two million pieces. On the declaration of war, the trade which had up till then been brisk was seriously dislocated. Exports to enemy countries, especially to the great emporium of Indian hides, Hamburg, were stopped, and exporters had to find new markets for the raw material. The raw hide business of India, it is well known, has hitherto been largely, if not quite entirely, in the hands of German firms or firms of German origin. Germany has had the largest share of India's raw hides. In the four months before the outbreak of war she took 39 per cent. of the total exports. In 1912-13 she took 32 per cent. and in 1913-14, 35 per cent. Raw hides were exported to Trieste in considerable quantities whence they were taken to Germany or Austria. In the four months before the outbreak of war 15 per cent. of India's exports passed through Trieste; in 1913-14 the percentage was 21.

Trade of the year.—The main features of the trade of 1917-18 were a considerable decrease in the exports of raw hides, an increase in the exports of tanned hides, and a decrease in the exports of raw and tanned skins. The quantity of raw hides exported (20,900 tons) was less than one-half of that of the preceding year and only 42 per cent. of the pre-war average. Of these, exports of cow hides, amounted to 15,879 tons, valued at Rs. 2,32 lakhs being 54 per cent. of the preceding year's exports of 29,082 tons, valued at Rs. 5,00 lakhs. The export of raw cow hides was very largely under Government control, the quality suitable for Army selection leather, after meeting the requirements of Indian tanners, being purchased for the British and Italian Governments. The decrease in exports is accounted for partly by the great increase in the tanning of cow hides in India for Army purposes, and partly by the greater scarcity and cost of freight which limited the export of inferior qualities of hides. Government control, which included a prohibition of export on private account of weights suitable for Army work, accounts also for the change in the direction of the trade and the decrease in the exports to the United States of America, which took 500 tons only as against 10,400 tons in 1913-17. The largest exports were to Italy 7,600 tons (7 per cent. less than in the preceding year) and the United Kingdom came next with 7,400 tons as against 5,300 tons in 1916-17 and 700 tons in the pre-war year 1913-14.

Exports of raw buffalo hides (4,245 tons valued at Rs. 64 lakhs) were 33 per cent. only of the preceding year's figures (13,055 tons valued at Rs. 2,03 lakhs). The decline was due principally to freight difficulties and the weakness of the United States market. There has, however, also been a great increase in the quantity of buffalo hides tanned in India, particularly at Cawnpore, for soles of Army boots and for equipment. The United States was, as usual, the biggest bu but took only 2,741 tons as against 10,786 t in 1916-17. The United Kingdom was sec with 1,429 tons as against 1,871 tons in 1916

Raw skins decreased in quantity by 21 cent. to 22,400 tons, mainly accounted for smaller exports to the United States. Eig per cent. of the quantity exported went to United States as against 87 per cent. in the p vious year. The remainder was shipped chi to the United Kingdom and Australia which t 2,600 tons and 1,000 tons, respectively, as aga 2,100 tons and 300 tons in the preceding y Nine-tenths of the shipments of raw skins c sisted of goat skins. The quantity of tan hides exported increased by 13 per cent. to c 18,300 tons and was nearly double the pre-quinquennial average. Almost the entire qu tity was shipped to the United Kingdom. Ne 95 per cent. of the exports was tanned cow hi the shipments of which increased in the y under review to 17,300 tons from 14,300 ton the previous year and 7,900 tons in the pre- year 1913-14. According to the Controller Hides, at least three-fifths of the upper leat used in the United Kingdom in the manufact of boots for the British and Allied armie supplied from Indian tanned cow hides alm all of which were tanned in the Madras Bombay Presidencies. Large stocks were h by Government at Madas and Bombay at close of the year awaiting facilities for exp and in addition about 40,000 hides monthly w supplied from Bombay tanneries to Cawnp for Army work in India. Owing to decrea imports of leather and leather manufactu a much larger quantity of hides is being tan for local consumption.

The trade in hides and skins and the cr in leather manufacture are in the hands eit of Mahomedans or of low caste Hindus, a are on that account participated in by a co paratively small community. The traffic subject to considerable fluctuations concomita with the vicissitudes of the seasons. In fami years for instance the exports of untann hides rise to an abnormal figure. The trai is also peculiarly affected by the difficulty obtaining capital and by the religious objecti which assigns it to a position of degradati and neglect: it has thus become a monopo within a restricted community and suffers fr the loss of competition and popular intere and favour.

No large industry has changed more rapic and completely than that of leather. the **chrome process**, for example, super leather may be produced from the strong buffalo hides in seven days, from cowhide twenty-four hours, and from sheep and go skins in six to eight hours; and these oper tions formerly took thirty days or as much eighteen months. Of these changes the nati tanners of India were slow to take advanta but in spite of general backwardness the leath produced by some of the tanneries, especia those under European management, is certain respects equal to the best import articles. But as a result of India being al

to adopt up-to-date methods, there has been a decline in the demand for Indian dressed skins, while the demand for raw skins has increased considerably. The chief tanneries are situated at Cawnpore, Calcutta and Bombay. Efforts are being made to remedy the wastage caused by defective methods of killing and flaying animals.

Indigenous methods.—India possesses a large selection of excellent tanning materials such as Acacia pods and bark, Indian sumach, the Tanner's cassia, Mangroves, and Myrabolans. By these and such like materials and by various methods and contrivances, hides and skins are extensively cured and tanned and the leather worked up in response to an immense, though purely local, demand. But the inferior quality of the leather so used by effect methods may be illustrated by the fact that the articles produced rarely fetch much more than one-fourth the value of the corresponding articles made of imported or Cawnpore (European factory) leather.

INVENTIONS AND DESIGNS.

A handbook to the **Patent Office** in India, which was published in 1916 by the Government Press, Calcutta, gives the various Acts, rules, and instructions bearing on the subject together with hints for the preparation of specifications and drawings, hints for searchers and other valuable information that has not hitherto been readily accessible to the general public in so convenient a form. In the preface Mr. H. G. Graves, Controller of Patents and Designs, explains the scope of the Patent laws in India and indicates wherein they differ from English law and procedure.

The foundation of patent legislation throughout the world lies in the English "Statute of Monopolies" which was enacted in 1623, the 21st year of King James the First. In part this Act has been repealed but the extant portion of the more important section 6 is as follows:—"Provided also that any declaration before mentioned shall not extend to any letters patent and grants of privilege for the term of fourteen years or under, hereafter to be made of the sole working or making of any manner of new manufactures within this realm to the true and first inventor and inventors of such manufactures, which others at the time of making of such letters patent and grants shall not use, so as also they be not contrary to the law nor mischievous to the State by raising prices of commodities at home, or hurt of trade, or generally inconvenient; the said fourteen years to be accomplished from the date of the first letters patent or grants of such privilege hereafter to be made, but that the same shall be of such force as they should be if this Act had never been made, and of none other."

The **existing Indian patent law** is contained in the Indian Patents and Designs Act, 1911, supplemented by the Indian Patents and Designs (Temporary Rules) Act, 1915, and by the Rules made under those Acts. The Patent Office does not deal with trade marks or with copyright generally in books, pictures, music and other matters which fall under the Indian Copyright Act III of 1914. There is, in fact, no provision of law in British India for the registration of Trade Marks which are protected under the Merchandise Marks Act (IV of 1889) which forms Chapter XVIII of the Indian Penal Code.

On the whole, Indian law and procedure closely follow that in the United Kingdom for the protection of inventions and the registration of designs, as they always have done in matters of major interest. One main difference exists, however, as owing to the absence of provision of law for the **registration of trade marks**, India cannot become a party to the International Convention under which certain rights of priority are obtainable in other countries.

The first Indian Act for granting exclusive privileges to inventors was passed in 1856, after an agitation that had been carried on fitfully for some twenty years. Difficulties arising from an uncertainty as to the effect of the Royal Prerogative prevented earlier action, and, owing to some informalities the Act itself was repealed in the following year. In 1859 it was re-enacted with modifications, and in 1872 the Patterns and Designs Protection Act was passed. The protection of Inventions Act of 1883, dealing with exhibitions, followed, and then the Inventions and Designs Act of 1888. All these are now replaced by the present Act of 1911.

The existing Acts extend to the whole of British India, including British Baluchistan and the Santhal Parganas. This of course includes Burma but it does not embrace the Native States. Of the latter three, *viz.*, (1) Hyderabad (Deccan), (2) Mysore, (3) Gwalior have ordinances of their own, for which particulars must be obtained from the Government of the States in question as they are not administered by the Indian Patent Office in Calcutta. The object of the Act of 1911 was to provide a simpler, more direct, and more effective procedure in regard both to the grant of patent rights and to their subsequent existence and operation. The changes made in the law need not here be referred to in detail. They gave further protection both to the inventor, by providing that his application should be kept secret until acceptance, and to the public, by increasing the facilities for opposition at an effective period. At the same time a Controller of Patents and Designs was established, with power to dispose of many matters previously referred to the Governor-General in Council, and provision was made for the grant of a sealed "patent" instead of for the mere recognition of an "exclusive privilege." The provisions of the Act follow with the necessary modifications those of the British Inventions and Designs Act of 1907.

The **annual report** of the Indian Patents Office for the calendar year 1916 states that four hundred and forty-two applications for patents and 1,773 applications to register designs were made in 1916 as compared with 445 and 904 respectively in 1915. The income of the office increased from Rs. 69,760-3 in 1915 to Rs. 77,608-13 in 1916. Figures for

previous years are published in the Report. Mr. Graves, the Comptroller, remarks that if the natural increase of pre-war conditions had been continued, there would have been about 800 applications for patents and an income of over Rs. 80,000. Apart from the falling-off in applications, the war does not appear to have made any material change in the nature of inventions in this country where the novel necessities of the moment are not apparent and cannot therefore be supplied by would-be patentees. Altogether 2,649 patents were in force on 31st December 1916. These include 1,814 patents out of 2,108 sealed on 2,858 applications under the Indian Patents and Designs Act, 1911, together with 65 of the 148 patents converted under section 81 of that Act. The balance 770 consists of exclusive privileges remaining under the Inventions and Designs Act 1888.

Applications for **patent by enemy subject** are permitted, but as a rule are held in suspense and the sealing of patents on their applications is not affected for the present. Patents in existence are, however, renewable at the option of the holder even if he be an enemy as it is not considered desirable that the property therein should be destroyed. It can, however, be alienated or utilised for the benefit of the public on application. Provision for these proceedings is made by a License Act, and rules introduced after the year. In their main lines the License Act and rules follow the practice in the United Kingdom. They enable the controller to deal with patents held by enemy subjects and remove the disabilities under which any person may suffer in respect of patents or designs owing to the present state of the war.

Printed Specification of applications for patents, which have been accepted (8 annas per copy), may be seen free of charge, together with other publications of the Patent Office at the following places:—

AHMEDABAD	R. C. Technical Institute.
ALLAHABAD	Public Library.
BANGALORE	Indian Institute of Science.
BOMBAY	Record Office.
„	Victoria Jubilee Technical Institute, Byculla.
„	The Bombay Textile and Engineering Association, No. 1A Sussex Road, Parel.
CALCUTTA	Patent Office, No. 1, Council House Street.
„	Civil Engineering College, Sibpur
CAWNPORE	Office of the Director of Industries United Provinces.
CHINSURAH	Office of the Commissioner, Burdwan Division.
CHITTAGONG	Office of the Commissioner, Chittagong Division.
DACCA	Office of the District Board, Dacca
DELHI	Office of the Deputy Commissioner
HYDERABAD	Revenue Department of His Highness the Nizam's Government.
JALPAIGURI	Office of the Commissioner, Rajshahi Division.
KARACHI	Office of the City Deputy Collector
LAHORE	Punjab Public Library
LONDON	The Patent Office, 25, Southampton Buildings, W. C.
MADRAS	Record Office, Egmore.
„	College of Engineering.
MYSORE	Office of the Secretary to Government, General and Revenue Department.
NAGPUR	Victoria Technical Institute.
POONA	College of Engineering.
RANGOON	Office of the Revenue Secretary Government of Burma.
ROORKEE	Thomas College.
SHOLAPUR	Office of the Collector.

COPYRIGHT.

There is no provision of law in British India for the registration of Copyright. Protection for Copyright accrues under the Indian Copyright Act under which there is now no registration of rights but the printer has to supply copies of these work as stated in that Act and in the Printing Presses and Books, Act XXV of 1867. The Indian Copyright Act made such modifications in the Imperial Copyright Act of 1911 as appeared to be desirable for adapting its provisions to the circumstances of India. The Imperial Act of 1911 was brought into force in India by proclamation in the *Gazette of India* on October 30, 1912. Under s 27 of that Act there is limited power for the legislature of British possessions to modify or add to the provisions of the Act in its application to the possession, and it is under this power that the Indian Act of 1914 was passed. The portions of the Imperial Act applicable to British are scheduled to the Indian Act. The Act to which these provisions are scheduled makes some formal adaptations of them to Indian law and procedure, and some material modifications of them in their application to translations and musical compositions. In the case of works first published in British India the sole right to produce, reproduce, perform or publish a translation is, subject to an important proviso, to subsist only for ten years from the first publication of the work. The provisions of the Act as to mechanical instruments for producing musical sounds were found unsuitable to Indian conditions. "The majority of Indian melodies" it was explained in Council, "have not been published, i.e. written in staff notation, except through the medium of the phonograph. It is possible in many cases to identify the original composer or author, and the melodies are subject to great variety of notation and tune. To meet these conditions s. 5 of the Indian Act follows the English Musical Copyright Act of 1902 by defining **musical work** as meaning any combination of melody and harmony, or either of them, printed, reduced to writing, or otherwise graphically produced or reproduced."

Coinage, Weights and Measures.

As the currency of India is based upon the rupee, statements with regard to money are generally expressed in rupees, nor has it been found possible in all cases to add a conversion into sterling. Down to about 1873 the gold value of the rupee (containing 165 grains of pure silver) was approximately equal to 2s., or one-tenth of a £, and for that period it is easy to convert rupees into sterling by striking off the final cipher (Rs. 1,000=£100). But after 1873, owing to the depreciation of silver as compared with gold throughout the world, there came a serious and progressive fall in the exchange, until at one time the gold value of the rupee dropped as low as 1s. In order to provide a remedy for the heavy loss caused to the Government of India in respect of its gold payments to be made in England, and also to relieve foreign trade and finance from the inconvenience due to constant and unforeseen fluctuations in exchange, it was resolved in 1893 to close the mints to the free coinage of silver, and thus force up the value of the rupee by restricting the circulation. The intention was to raise the exchange value of the rupee to 1s. 4d., and then introduce a gold standard at the rate of Rs. 15=£1. From 1899 onwards the value of the rupee has been maintained, with insignificant fluctuations, at the proposed rate of 1s. 4d., and consequently since that date three rupees have been equivalent to two rupees before 1873. For the intermediate period, between 1873 and 1899, it is manifestly impossible to adopt any fixed sterling value for a constantly changing rupee. But since 1899, if it is desired to convert rupees into sterling, not only must the final cipher be struck off (as before 1873), but also one-third must be subtracted from the result. Thus Rs. 1,000=£100—⅓=(about) £67.

Notation.—Another matter in connection with the expression of money statements in terms of rupees requires to be explained. The method of numerical notation in India differs from that which prevails throughout Europe. Large numbers are not punctuated in hundreds of thousands and millions, but in lakhs and crores. A **lakh** is one hundred thousand (written out as 1,00,000), and a **crore** is one hundred lakh or ten millions (written out as 1,00,00,000). Consequently, according to the exchange value of the rupee, a lakh of rupees (Rs. 1,00,000) may be read as the equivalent of £10,000 before 1873, and as the equivalent of (about) £6,667 after 1899, while a crore of rupees (Rs. 1,00,00,000) may similarly be read as the equivalent of £1,000,000 before 1873, and as the equivalent of (about) £666,667 after 1899.

Coinage.—Finally, it should be mentioned that the rupee is divided into 16 annas, a fraction commonly used for many purposes by both Natives and Europeans. The anna was formerly reckoned as 1½d., it may now be considered as exactly corresponding to 1d. The anna is again sub-divided into 12 pies.

Weights.—The various systems of weights used in India combine uniformity of scale with immense variations in the weight of units. The scale used generally throughout Northern India, and less commonly in Madras and Bombay, may be thus expressed one maund 40 seers, one seer=16 chittaks or 80 tolas. The actual weight of a seer varies greatly from District to District, and even from village to village, but in the standard system the tola is 180 grains Troy (the exact weight of the rupee), and the seer thus weighs 2·057 lb., and the maund 82·28 lb. The standard is used in official reports.

Retail.—For calculating retail prices, the universal custom in India is to express them in terms of seers to the rupee. Thus, when prices change what varies is not the amount of money to be paid for the same quantity, but the quantity to be obtained for the same amount of money. In other words, prices in India are quantity prices, not money prices. When the figure of quantity goes up, this of course means that the price has gone down, which is at first sight perplexing to an English reader. It may, however, be mentioned that quantity prices are not altogether unknown in England, especially at small shops where pennyworths of many groceries can be bought. Eggs, likewise, are commonly sold at a varying number for the shilling. If it be desired to convert quantity prices from Indian into English denominations without having recourse to money prices (which would often be misleading), the following scale may be adopted—based upon the assumption that a seer is exactly 2 lb., and that the value of the rupee remains constant at 1s. 4d., 1 seer per rupee=(about) 3 lb. for 2s., 2 seers per rupee=(about) 6 lb. for 2s., and so on.

The name of the unit for square measurement in India generally is the *bigha*, which varies greatly in different parts of the country. But areas have been expressed in this work either in square miles or in acres.

Proposed reforms.—Indian weights and measures have never been settled upon an organised basis suitable for commerce and trade characteristic of the modern age. They vary from town to town and village to village in a way that could only work satisfactorily so long as the dealings of towns and villages were self-contained and before roads and railways opened up trade between one and the other. It is pointed out that in England a hogshead of wine contains 63 gallons and a hogshead of beer only 54 gallons; that a bushel of corn weighs 46 lbs. in Sunderland and 240 lbs. in Cornwall; that the English stone weight represents 14 lbs. in popular estimation, but only 5 lbs., if we are weighing glass, and eight for meat, but 6 lbs. for cheese. Similar instances are multiplied in India by at least as many times as India is bigger than England. If we take, for instance, the maund denomination of weight common all over India, we shall find that in a given city there are nearly as many maunds as there are articles to weigh. If we consider the maund as between district and district the state of affairs is worse. Thus in the United Provinces alone, the maund of sugar weighs 48½ seers in Cawnpore, 40 in Muttra, 72½ in Gorakhpur, 40 in Agra, 50 in Moradabad, 43¾ in Saharanpur, 50 in Bareilly, 46 in Fyzabad, 48½ in Shahjehanpur, 51 in Goshangunge. The maund

varies throughout all India from the Bengal or railway maund of 82-2/7 lbs. to the Factory maund of 74 lbs. 10oz. 11drs., the Bombay maund of 28 lbs., which apparently answers to the Forest Department maund in use at the Fuel Depot, and the Madras maund, which some authorities estimate at 25 lbs. and others at 24 lbs. and so on.

Committees of Inquiry.—These are merely typical instances which are multiplied indefinitely. There are variations of every detail of weights and measures in every part of India. The losses to trade arising from the confusion and the trouble which this state of things causes are heavy. Municipal and commercial bodies are continually returning to the problem with a view to devising a practical scheme of reform. The Supreme and Provincial Governments have made various attempts during 40 years past to solve the problem of universal units of weights and measures and commerce and trade have agitated about the question for the past century. The Indian railways and Government departments adopted a standard tola (180 grains), seer (80 tolas) and maund (40 seers) and it was hoped that this would act as a successful "lead" which would gradually be followed by trade throughout the empire, but the expectation has not been realised.

The Government of India considered the whole question in consultation with the provincial Governments in 1890-1894 and various special steps have at different times been taken in different parts of India. The Government of Bombay appointed a committee in 1911 to make proposals for reform for the Bombay Presidency. Their final report has not been published, but they presented in 1912 an *ad interim* report which has been issued for public discussion. In brief, it points out the practical impossibility of proceeding by compulsory measures affecting the whole of India. The Committee stated that over the greater part of the Bombay Presidency a standard of weights and measures would be heartily welcome by the people. They thought that legislation compulsorily applied over large areas subject to many diverse conditions of trade and social life would not result in bringing about the desired reform so successfully as a "lead" supplied by local legislation based on practical experience. The want of coherence, *savoir faire*, or the means of co-operation among the people at large pointed to this conclusion. The Committee pointed out that a good example of the results that will follow a good lead is apparent in the East Khandesh District of the Presidency, where the District Officer, Mr. Simcox, gradually, during the course of three years, induced the people to adopt throughout the district uniform weights and measures, the unit of weight in this case being a tola of 180 grains. But the committee abstained from recommending that the same weights and measures should be adopted over the whole Presidency, preferring that a new system started in any area should be as nearly as possible similar to the best system already prevailing there.

Proposals from England.—Suggestions have been made by the British Weights and Measures Association and the Decimal Association, respectively, at different times that British weights and measures and the decimal system should be introduced. Both proposals fail to meet the special requirements set forth by the Bombay Committee. Variations of them which have been put forward by different bodies in India in recent years are that the English pound weight and the English hundredweight should be adopted as the unit of weight for all India. The argument in favour of the importation of an outside unit in this manner is that people in India will always associate with a given, familiar denomination of weight or measure the value they have been accustomed to consider in regard to it, but that if a new weight were introduced they would learn to use it in dealing with their neighbours, without the interference of anything resembling prejudice at what they might regard as an attempt to tamper with their old, traditional standards of dealing.

Committee of 1913.—The whole problem was again brought under special consideration by the Government of India in October, 1913, when the following committee was appointed to inquire into the entire subject anew:—

Mr. C. A. Silberrad (*President*).
Mr. A. Y. G. Campbell.
Mr. Rustomji Fardoonji.

This Committee reported, in August, 1915, in favour of a uniform system of weights to be adopted in India based on the 180 grain tola. The report says:—Of all such systems there is no doubt that the most widespread and best known is that known as the Bengal or Indian Railway weights. The introduction of this system involves a more or less considerable change of system in parts of the United Provinces (Gorakhpur, Bareilly and neighbouring areas), practically the whole of Madras, parts of the Punjab (rural portions of Amritsar and neighbouring districts), of Bombay (South Bombay, Bombay city and Gujarat), and the North West Frontier Province. Burma has at present a separate system of its own which the committee think it should be permitted to retain. The systems recommended are:—

FOR INDIA.

8 khaskhas	=	1 chawal
8 chawals	=	1 ratti
8 rattis	=	1 masha
12 mashes or 4 tanks	=	1 tola
5 tolas	=	1 chatak
16 chataks	=	1 seer
40 seers	=	1 maund

FOR BURMA.

2 small ywes	=	1 large ywe
4 large ywes	=	1 pe
2 pes	=	1 mu
5 pes or 2½ mus	=	1 mat
1 mat	=	1 ngamu
2 ngamus	=	1 tikal
100 tikals		1 peiktha or viss.

The tola is the tola of 180 grains, equal to the rupee weight. The viss has recently been fixed at 3· 60 lbs. or 140 tolas.

The recommendations of the Commission met with general approval and have been referred to the Provincial Governments for their consideration.

Legislation and Inspection.

The conditions of factory labour until 1913 were regulated by the Indian Factories Act of 1881, as amended in 1891. The chief provisions of the amended Act were Local Governments were empowered to appoint inspectors of factories, and certifying surgeons to certify as to the age of children. A mid-day stoppage of work was prescribed in all factories, except those worked on an approved system of shifts, and Sunday labour was prohibited, subject to certain exceptions. The hours of employment for women were limited to 11, with intervals of rest amounting to at least an hour and a half; their employment between 8 p.m. and 5 a.m. was prohibited, as a general rule, except in factories worked by shifts. The hours of work for children (defined as persons below the age of 14) were limited to seven, and their employment at night time was forbidden; children below the age of nine were not to be employed. Provision was made for the fencing of machinery and for the promulgation of rules as to water supply, ventilation, the prevention of overcrowding, etc.

Act of 1911.

The decision to undertake further legislation was arrived at after comprehensive inquiries. An important factor in the case was the increasing use of electric light in the Bombay Mills, which radically changed the conditions prevailing when the Act of 1891 was passed and had abolished the security that operatives would not be employed for more than 12 hours a day on the average. The question of the hours of employment in textile factories was brought into prominence by the period of prosperity that the cotton industry began to enjoy in the cold weather of 1904-05, a large number of persons operatives being regularly worked for 15 hours a day or even longer.

Owing to complaints regarding the long hours worked in many mills, the Government of India in 1906 appointed a small Committee with Commander Sir H. P. Freer-Smith, R.N., late Superintending Inspector for Dangerous Trades in England, as chairman, to conduct a preliminary inquiry into the conditions of labour in textile factories. The Committee recommended that the working hours of adult males should be limited to 12 hours a day; that certificates of age and physical fitness should be required prior to half-time employment and prior to employment as an adult; that night work of women should be prohibited; and that whole-time Medical Inspectors should be appointed.

The conclusions of this Committee formed the basis of an investigation, extending to all factories in India, by a representative Commission. This report disclosed the existence of abuses, particularly in connection with the employment of children, and the excessive hours worked by operatives generally in textile factories. The majority of the Commission advocated a statutory limitation of the working hours of male adults. But they recommended the formation of a class of "young persons" between 14 and 17 years of age, whose hours should be limited to 12, and considered that this would indirectly secure a 12 hours' day for male adults. They also recommended that the hours of work for children should be reduced from 7 to 6 hours and that the hours for women should be assimilated to those for "young persons," night work being prohibited for both classes. They recommended that children should be certified as to age and physical fitness.

Hours fixed.

The recommendations of the Committee and of the Commission having been considered by the Government of India and the Local Governments, a Bill was introduced in July 1908 to amend and consolidate the law relating to factories, and was finally passed into law as Act XII of 1911.

The new Act extended the definition of "factory" so as to include seasonal factories working for less than four months in the year; shortened the hours within which children (and, as a general rule, women) may be employed, and further restricted the employment of women by night by allowing it only in the case of cotton-ginning and pressing factories. It also contained a number of new provisions for securing the health and safety of the operatives, making inspection more effective, and securing generally the better administration of the Act. The most important feature of the Act, however, was the introduction of a number of special provisions applicable only to textile factories. The report of the Factory Commission showed that excessive hours were not worked except in textile factories. The Act for the first time applied a statutory restriction to the hours of employment of adult males by laying down that, subject to certain exceptions, "no person shall be employed in any textile factory for more than twelve hours in any one day." It is also provided in the case of textile factories that no child may be employed for more than six hours in any one day, and that (subject to certain exceptions, among which are factories worked in accordance with an approved system of shifts) no person may be employed before 5-30 a.m. or after 7 p.m. (the new limits laid down generally for the employment of women and children). Corresponding limitations are placed on the period for which mechanical or electrical power may be used.

Factory Inspection.

The inquiries of the Factory Commission showed that the then existing system of factory inspection had not sufficed to prevent widespread evasion of the provisions of the factory law. This result was attributed to the fact that the number of full-time factory inspectors was very small, the work of inspection being to a large extent in the hands of ex-officio inspectors (District Magistrates, Civil Surgeons, etc.), who, as the Commission reported, had neither the time nor the special knowledge necessary for the work. In Bombay Presidency, where there were three special inspectors, it was reported that the Act was on the whole, well enforced. Steps have been taken since to reorganise the staff of whole-time inspectors of factories in India and to

increase it to a strength sufficient to cope with the work of inspecting all the factories in India. The total strength of the staff is now 14, as compared with 6 at the time of the Factory Commission's report. Each of the larger provinces has at least one inspector. Bombay having five. Except that in a few cases these officers have duties also in connection with boiler inspection, their whole time is given to factory inspection. The District Magistrate remains an inspector, ex-officio, under the new Act, and other officers may be appointed additional inspectors, but it is contemplated that inspection by ex-officio inspectors will be to a large extent discontinued, or limited to special cases.

Life Insurance.

There are no publications from which a complete statistical survey of the various branches of insurance work in India can be obtained, but the official "Abstracts of Accounts and Valuation Statements in respect of Life Assurance Companies doing business in British India," published by the Government of India, give much information in regard to the 68 Life Assurance Companies subject to all the provisions of the Indian Life Assurance Companies Act, 1912, and some of those which are partially exempt from the Indian Act on the ground that they carry on business in the United Kingdom and comply with the provisions of the British Assurance Companies Act of 1909. It should be noticed that the various pension funds connected with Government services are exempt from the compliance with the Indian Act.

The oldest of the Indian Companies were established in Madras about 80 years ago: Bombay has none older than the Bombay Mutual, the Oriental and the Bombay Widows' Pension Fund which were established about 40 years ago. Life Assurance seems not to have been started in Bengal until much later, and it was not until 1906 that many Companies were established either in that Presidency or elsewhere in India.

In his introductory note to the official publication already mentioned, Mr. H. G. W. Meikle, Actuary to the Government of India, states that the total amount of the investments and other **realisable assets** of Indian Companies is worth 817 lakhs of rupees.

The total sums assured, including bonus additions under ordinary life assurance policies issued by Indian companies, increased by over 5 per cent. during the year 1917 and amounted to over 24 crores of rupees, or about 15 million pounds sterling.

The new sums assured by Indian companies, under ordinary life assurance policies during the year show a considerable increase, the total amount being nearly 2¼ crores as against 1 crore 90 lakhs in each of the two previous years.

Whole Life policies were issued last year for		17½ lakhs or	7·8	of the total.
Limited Payment policies	,, ,,	19 ,,	8·4	,,
Endowment Assurance policies	,,	172 ,,	77·0	,,
Children's Endowments and other classes of policies	,, ,,	15¼ ,,	6·8	,,
	Total ..	224 lakhs	100	

The following is the list of British, Colonial and Foreign Companies doing business both in the United Kingdom and in India partially exempted from the Indian Act, and the classes of business, in addition to Life Assurance, transacted by them :—

Name of Company.	Place of Head Office.	Life Annuities.	Annuities, certain Capital redemption, etc.	Fire.	Marine.	Accident and Sickness.	Employers' Liability.	Burglary and Fidelity Guarantee, etc.
1. Alliance	London	*a*	C	F	M	S	E	G
2. Atlas	London	*a*	C	F	..	S	E	G
3. Commercial Union ..	London	*a*	C	F	M	S	E	G
4. Gresham	London	*a*	C	..	..	..	..	..
5. Law Union and Rock .	London	*a*	C	F	..	S	E	G
6. Liverpool and London and Globe	Liverpool.. ..	*a*	C	F	M	S	E	G
7. London Assurance Corporation	London	*a*	C	F	M	S	E	G
8. North British and Mercantile	Edinburgh ..	*a*	C	F	..	..	..	..
9. Northern	Aberdeen.. ..	*a*	C	F	..	S	E	G
10 Norwich Union ..	Norwich	*a*	C	..	..	..	..	..
11. Phœnix	London	*a*	C	F	M	S	E	G
12. Royal	Liverpool.. ..	*a*	C	F	..	S	E	G
13. Royal Exchange ..	London	*a*	C	F	M	S	E	G
14. Royal London Auxiliary	London.. ..	*a*	C	F	..	S	..	G
15. Scottish Union and National	Edinburgh ..	*a*	C	F	M	S	E	G
16. Standard	Edinburgh ..	*a*	C	..	..	..	..	..
17. Yorkshire	York	*a*	C	F	M	S	E	G
18. Manufacturers.. ..	Canada	*a*	..	..	..	..	..	..
19. Sun of Canada.. ..	Canada	*a*	C	..	..	S	..	..
20. National Mutual of Australasia	Australia.. ..	*a*						
21. Great Eastern ..	Singapore ..	*a*						
22. China Mutual	Shanghai.. ..	*a*						
23. Shanghai	Shanghai.. ..	*a*						
24. New York	United States ..	*a*						

In the following list the names of the existing Indian Life Assurance Companies have been arranged according to the date of establishment under the Province in which they were established :—

Years.	Madras.	Bombay.	Bengal.	Punjab.	United Provinces, Assam, Ajmer-Merwara and Civil and Military Station of Bangalore.
1829 ..	Madras Equitable ..	....	....	....	....
1833 ..	Madras Widows' ..	....	....	....	....
1847 ..	....	....	....	Christian Mutual ..	....
1849 ..	Tinnevelly C. M. S. Widows' Fund.	....	....	....	....
1871 ..	....	Bombay Mutual ..	....	....	....
1874 ..	....	Oriental ..	....	....	....
1876 ..	....	Bombay Widows' ..	....	....	....
1885 ..	....	Goan Mutual Help ..	....	....	....
1886 ..	....	....	....	....	....
1887 ..	....	....	....	....	....
1888 ..	Mangalore Roman Catholic	B. B. & C. I. Zoroastrian..	....	....	....
1889 ..	....	Bombay Zoroastrian ..	....	....	....
1890 ..	....	....	....	....	....
1891 ..	....	Gujrat Zoroastrian ..	Hindu Provident Fund ..	....	....
1892 ..	....	Indian Life ..	....	....	....
1893 ..	....	....	....	....	Indian Empire Branch of Rechabites (United Provinces)
1894 ..	....	Sind Hindu Provident ..	....	....	....
1895 ..	....	....	....	....	....

In the following ... which they were established ;— ... Insurance Companies have been arranged according to the date of establishment

Years.	Madras.	Bombay.	Bengal.	Punjab.	United Provinces, Assam, Ajmer-Merwara and Civil and Military Station of Bangalore.
1896 ..	....	Empire of India ..	...	Bharat ..	....
1897 ..	....	....	....	....	....
1898 ..	....	....	....	....	....
1899 ..	....	....	....	....	....
1900 ..	....	....	....	....	....
1901 ..	....	....	....	Simla Mutual ..	....
1902 ..	....	....	....	....	....
1903 ..	....	....	....	....	....
1904 ..	....	....	....	....	....
1905 ..	....	....	....	....	....
1906 ..	Coromandel ; United India.	All India United ..	National Indian ; National Insurance.	Co-Operative ..	...
1907 ..	....	....	Hindusthan Co-Operative ..	....	....
1908 ..	....	Bombay Life ..	India Equitable ..	Hindustan (Gujranwala) ..	General (Ajmer-Merwara).
1909 ..	....	....	Chittagong ..	....	....
1910 ..	....	....	Bengal Mercantile ..	Popular ..	Aryya (Assam).
1911 ..	....	Asian Commercial ..	Universal ..	....	....
1912 ..	....	....	Unique ..	....	....
1913 ..	....	Industrial & Prudential ; Western India ; East and West.	Light of Asia ; Provincial ..	....	....
1914 ..	....	....	....	British Indian ..	....
1915 ..	....	....	....	....	All India and Burma (Bangalore).
1916 ..	....	Zenith ..	....	....	....
1917 ..	....	Britannia ..	....	....	....

Chambers of Commerce.

Modern commerce in India was built up by merchants from the west and was for a long time entirely in their hands. Chambers of Commerce and numerous kindred Associations were formed by them for its protection and assistance. But Indians have in recent years, taken a large and growing part in this commercial life. The extent of their participation varies greatly in different parts of India, according to the natural proclivities and genius of different races. Bombay, for instance, has led the way in the industrial and commercial regeneration of the new India, while Bengal, very active in other fields of activity, lags behind in this one. Arising from these circumstances we find Chambers of Commerce in Bombay, Karachi, Calcutta, Madras and other important centres, with a membership both European and Indian; but alongside these have sprung up in recent years certain Associations, such as the Bombay Indian Merchants' Chamber and Bureau, of which the membership is exclusively Indian. These different classes of bodies are in no sense hostile to one another and constantly work in association.

The London Chamber of Commerce in 1912, realising the increasing attention demanded by the economic development of India, took steps to form an "East India Section" of their organization. The Indian Chambers work harmoniously with this body, but are in no sense affiliated to it, nor is there at present any inclination on their part to enter into such close relationship, because it is generally felt that the Indian Chambers can themselves achieve their objects better and more effectively than a London body could do for them, and on various occasions the London Chamber, or the East India Section of it have shown themselves out of touch with what seemed locally to be immediate requirements in particular matters.

A new movement was started in 1913 by the Hon. Sir Fazulbhoy Currimbhoy Ibrahim, a leading millowner and public citizen of Bombay, which promises to lead to great improvement in strengthening Indian commercial organization. Sir Fazulbhoy's original plan was for the formation of an Indian Commercial Congress. The proposal met with approval in all parts of India. The scheme was delayed by the outbreak of war but afterwards received an impetus from the same cause and the first Congress was held in the 1915 Christmas holiday season in the Town Hall, Bombay. The list of members of the Reception Committee showed that all the important commercial associations of Bombay were prepared to co-operate actively.

The Congress was attended by several hundred delegates from all parts of India. Mr. D. E. Wacha, President of the Bombay Indian Merchants' Chamber, presided, as Chairman of the Reception Committee, at the opening of the proceedings and the first business was the election of Sir Fazulbhoy Currimbhoy as the first President. The Congress resolved upon the establishment of an Associated Indian Chamber of Commerce, and elected a Provincial Committee empowered to take the necessary steps to get the Association registered and to enrol members and carry on work as Committee of the Chamber until a new Committee should be appointed a year later. The Congress also approved of the draft constitution.

The following are the principal paragraphs of a Memorandum of Association of the new Associated Chamber as approved by the Congress:—

I. The name of the Chamber will be "THE ASSOCIATED INDIAN CHAMBER OF COMMERCE."

II. The Registered Office of the Chamber will be in Bombay.

III. The objects for which the Chamber is established are:—

(*a*) To discuss and consider questions concerning and affecting trade, commerce, manufactures, and the shipping interests, at meeting of delegates from Indian Chambers of Commerce and Commercial Associations or Bodies and to collect and disseminate information from time to time on matters affecting the common interests of such Chambers or Associations or Bodies and the commercial, manufacturing and shipping interests of the country.

(*b*) To communicate the opinions of the Chambers of Commerce and other Commercial Associations or Bodies separately or unitedly, to the Government or to the various departments thereof, by letter, memorial, deputation or otherwise.

(*c*) To petition Parliament or the Government of India or any Local Government or authority on any matter affecting trade, commerce, manufacture or shipping.

(*d*) To prepare and promote in Parliament or in the Legislative Councils of India, both Imperial and Provincial, Bills in the interest of trade, commerce, manufactures, and shipping of the country and to oppose measures which, in the opinion of the Chamber, are likely to be injurious to those interests.

(*e*) To attain those advantages by united action which each Chamber or Association or body may not be able to accomplish in its separate capacity.

(*f*) To have power to establish an office either in England or in any part of British India with an Agent there, in order to ensure to the various Chambers early and reliable information on matters affecting their interests and to facilitate communication between the Chamber or individual chambers and the Government or other public bodies, and generally to conduct and carry on the affairs of the Chamber.

(*g*) To organise Chambers of Commerce, Commercial Associations or Bodies in different trade centres of the Country.

(*h*) To convene when necessary the Indian Commercial Congress at such places and at such times as may be determined by a Resolution of the Chamber.

(*i*) To do all such other things as may be incidental or conducive to the above objects.

The Articles of Association provide for the management of the Chamber by an Executive Council composed of a President, Vice-President, and ten other members elected at the annual meeting of the Associated Chamber, the Executive Council to present a report and statement of accounts at each annual meeting. The Articles declare the number of members of the Associated Chamber not to exceed one hundred, and the Executive Council are given power to elect honorary members. "There shall be an annual meeting of the Associated Indian Chamber held at Bombay on a date to be fixed by the Executive Council in the month of February," or at some other time, and "semi-annual or special meetings . . . may be convened by the Executive Council or on the requisition of one-third of the total number of members addressed to the Secretary . . . "

The following are details of the principal Chambers of Commerce and kindred bodies in India at the present time :—

BENGAL.

The Bengal Chamber of Commerce was founded in 1834. Its head-quarters are in Calcutta. Other societies connected with the trade and commerce of the city are the Royal Exchange, the Bengal Bonded Warehouse Association, the Calcutta Trades Association, the Bengal National Chamber of Commerce and the Marwari Chamber of Commerce. The Bengal Chamber is registered with a declaration of membership of 200. Its objects are the usual purposes connected with the protection of trade " in particular in Calcutta." There are two classes of members, Permanent and Honorary.

Merchants, bankers, shipowners, representatives of commercial, railway and insurance companies, brokers, persons and firms engaged in commerce, agriculture, mining or manufacture, and joint stock companies or other corporations, formed for any purpose or object connected with commerce, agriculture, mining or manufacture, and persons engaged in or connected with art, science or literature, may be elected as permanent members of the Chamber.

A candidate for election as a permanent member, whether an individual, a firm or a joint stock company or other corporation, must be proposed by one and seconded by another permanent member, and may be elected provisionally by the Committee, but that election is subject to confirmation at the next annual general meeting. The subscription to the funds of the Chamber of permanent members residing or carrying on business in Calcutta is Rs. 25 per mensem, and that of permanent members residing or carrying on business elsewhere than in Calcutta Rs. 32 per annum. No entrance fee is charged. Honorary members are not required to subscribe to the funds of the Chamber. Officials and others indirectly connected with the trade, commerce or manufactures of Bengal, or who may have rendered distinguished service to the interests represented by the Chamber, may be elected honorary members by the Committee upon the proposal of any two permanent members whether members of the Committee or not. Strangers visiting the Presidency may be admitted by the Committee as honorary members for a period not exceeding two months on the proposal of any permanent member whether a member of the Committee or not. Honorary members are entitled to receive the last published report of the Committee, to attend and speak but not to vote at any general meeting held during their membership, and may upon the invitation of the President, Vice-President or Chairman, as the case may be, attend under the like conditions any meeting of Committee or of any departmental committee or sub-committee.

The affairs of the Chamber are conducted by the following officers, namely, a President, Vice-President, seven ordinary members of Committee, a Secretary and two Assistant Secretaries and an Auditor. The Officers of the Chamber, with the exception of the Secretary, Assistant Secretaries and Auditor, act without remuneration. The following are the President and his Committee appointed for the year 1918-1919 :—

President.—Hon. Mr. W. A. Ironside (Bird & Co.)

Vice-President.—Hon. Mr. W. E. Crum, O.B.E. (Graham & Co.)

Committee.—Messrs. E. A. S. Bell (Eastern Bengal Ry.), A. Cameron (Mackinnon, Mackenzie & Co), W. O. Grazebrook (Gillanders Arbuthnot & Co.), H. Harris (Chartered Bank of India, Australia & China), R. Langford James (James, Finlay & Co.), Hon. Mr. J. Mackenzie (Macneill & Co.), and Hon. Mr. R. M. Watson Smyth (Turner, Morrison & Co.).

The Secretary of the Chamber is Mr. H. M. Haywood. Asst. Secys.—Mr. D. K. Cunnison and Mr. A. C. Daniel.

The following are the public bodies to which the Chamber has the right of returning representatives, and the representatives returned for the current year :—

Viceroy's Legislative Council.—The Hon'ble Mr. W. A. Ironside.

Bengal Legislative Council.—The Vice-President of the Chamber and the Hon. Mr. F. W. Carter, C.I.E.

Calcutta Port Commission.—The Hon. Mr. J. Mackenzie (Macneill & Co.), the Hon. Mr. W. E. Crum, O. B. E. (Graham & Co.), Mr. A. Cameron (Mackinnon, Mackenzie & Co.), Mr. C. F. Beadel (Becker, Gray & Co.), the Hon. Mr F. W. Carter, C.I.E. (Turner Morrison & Co., Ld.), and Mr. L. Edwards (Andrew Yule & Co.).

Calcutta Municipal Corporation.—Messrs. E. W. Bowrey (McLeod & Co.), Geo. Morgan (H. D. Cartwright & Co.), T. R. Pratt and W. R. Rae (Sun Insurance Office).

Bengal Boiler Commission.—Messrs. C. L. Thomson (Barnagore Jute Factory Co., Ltd.), H. H. Reynolds, M.I.C.E. (Bengal Coal Co., Ltd.), and T. Wilson (Jessop & Co., Ltd.).

Board of Trustees of the Indian Museum—Hon. Mr. R. M. Watson Smyth (Turner Morrison & Co., Ld.).

Bengal Smoke Nuisances Commission—Messrs. A. Cochran (Burn & Co., Ltd.) and J R. Murray (Clive Jute Mills).

Calcutta Improvement Trust—Mr. W. K. Dods (Agent, Hongkong and Shanghai Banking Corporation).

The Chamber elects representatives to various other bodies of less importance, such as the committee of the Calcutta Sailors' Home, and to numerous subsidiary associations. The following are the recognised associations of the Bengal Chamber of Commerce:—

Calcutta Wheat and Seed Trade Association, Indian Jute Mills Association, Indian Tea Association, Calcutta Tea Traders Association, Calcutta Fire Insurance Agents Association, Calcutta Import Trade Association, Calcutta Marine Insurance Agents Association, The Wine, Spirit and Beer Association of India, Indian Mining Association, Calcutta Baled Jute Association, Indian Paper Makers Association, Indian Engineering Association, Calcutta Jute Fabrics Shippers Association, Calcutta Hydraulic Press Association, Jute Fabric Brokers Association, Baled Jute Shippers Association, Calcutta Jute Dealers Association and Calcutta Liners Conference.

The Chamber maintains a Tribunal of Arbitration for the determination, settlement and adjustment of disputes and differences relating to trade, business, manufactures, and to customs of trade, between parties, all or any of whom reside or carry on business personally or by agent or otherwise in Calcutta, or elsewhere in India or Burmah, by whomsoever of such parties the said disputes and differences be submitted. The Secretary of the Chamber acts as the Registrar of the Tribunal, which consists of such members or assistants to members as may, from time to time, annually or otherwise be selected by the Registrar and willing to serve on the Tribunal. The Registrar from time to time makes a list of such members and assistants.

The Chamber also maintains a Licensed Measurers Department controlled by a special committee. It includes a Superintendent, Deputy Superintendent (Mr. A. H. Lugg) and two Assistant Superintendents and the staff at the time of the last official returns consisted of 145 officers. The usual system of work for the benefit of the trade of the port is followed. The Department has its own provident fund and compassionate fund and Measurers' Club. The Chamber does not assist in the preparation of official statistical returns. It publishes weekly the *Calcutta Prices Current* and its Monthly Supplement and also publishes a large number of statistical circulars of various descriptions in addition to a monthly abstract of proceedings and many other circulars on matters under discussion.

BOMBAY.

The object and duties of the Bombay Chamber, as set forth in their rules and regulations, are to encourage a friendly feeling and unanimity among commercial men on all subjects involving their common good; to promote and protect the general mercantile interests of this Presidency; to collect and classify information on all matters of general commercial interest; to obtain the removal, as far as such a Society can, of all acknowledged grievances affecting merchants as a body, or mercantile interests in general; to receive and decide references on matters of usage and custom in dispute, recording such decisions for future guidance, and by this and such other means, as the Committee for the time being may think fit, assisting to form a code of practice for simplifying and facilitating business; to communicate with the public authorities, with similar Associations in other places and with individuals, on all subjects of general mercantile interests; and to arbitrate between parties willing to refer to, and abide by, the judgment of the Chamber.

The Bombay Chamber was established in 1836, under the auspices of Sir Robert Grant, who was then Governor of the Presidency, and the programme described above was embodied in their first set of rules. There is affiliated with the Chamber the Bombay Millowners' Association, which exists to carry out the same general objects as the Chamber in the special interests of "millowners and users of steam and water power." According to the latest returns, the number of members of the Chamber is 134. Of these 16 represent banking institutions, 5 shipping agencies and companies, 3 firms of solicitors, 3 railway companies, 4 insurance companies, 8 engineers and contractors, 95 firms engaged in general mercantile business.

All persons engaged or interested in mercantile pursuits desirous of joining the Chamber, and disposed to aid in carrying its objects into effect are eligible to election to membership by ballot. The Chamber member's subscription is Rs. 20, and the Associate member's subscription is Rs. 15 per month and an additional charge of Rs. 240 per annum is made to firms as subscription to the trade returns published by the Chamber. Gentlemen distinguished for public services, or "eminent in commerce and manufactures," may be elected honorary members and as such are exempt from paying subscriptions. Any stranger engaged or interested in mercantile pursuits and visiting the Presidency may be introduced as a visitor by any Member of the Chamber inserting his name in a book to be kept for the purpose, but a residence of two months shall subject him to the rule for the admission of members.

Officers of the Year.

The affairs and funds of the Chamber are managed by a committee of nine ordinary members, consisting of the chairman and deputy-chairman and seven members. The committee must, as a rule, meet at least once a week and the minutes of its proceedings are open to inspection by all members of the Chamber, subject to such regulations as the committee may make in regard to the matter

A general meeting of the Chamber must be held once a year and ten or more members may requisition, through the officers of the Chamber, a special meeting at any time, for a specific purpose.

The Chamber elects representatives as follows to various public bodies :—

Legislative Council of the Governor-General, one representative. The Chamber may elect anyone, but in practice they have hitherto returned their chairman.

Legislative Council of the Governor of Bombay, one representative, who may also be anyone, but is, in practice, always the deputy chairman.

Bombay Municipal Corporation, two members, elected for three years.

Board of Trustees for the Improvement of the City of Bombay, one member, elected for two years.

Board of Trustees of the Port of Bombay, five members, two and three being elected in alternate years.

Representatives on the Legislative Councils become ex-officio members of the committee of the Chamber, during their terms of office, if they are not already members.

The following are the officers of the Chamber for the year 1918-19 and their representatives on the various public bodies :—

Chairman.—The Hon'ble Mr. Malcolm N. Hogg (Forbes, Forbes, Campbell & Co., Ltd.)

Deputy Chairman.—The Hon'ble Mr. S. J. Gillum (Bombay Coy., Ltd.)

Committee.—Messrs. J. B. Bennett (Latham Abercrombie & Co.), G. H. Bowman (Lyon Lord & Co., Ltd.), J. H. Fye (Mackinnon, Mackenzie & Co.), Ralph Kidd (National Bank of India, Ltd.), Nigel F. Paton (W. & A. Graham & Co.), A. J. Raymond (E. D. Sassoon & Co.), R. Woolcombe (B. B. & C. I. Railway).

Secretary : Mr. R. E. Gregor-Pearse.

Representatives on—

Viceregal Legislative Council: The Chairman.

Bombay Legislative Council: The Deputy Chairman.

Bombay Improvement Trust: Mr. A. M. Tod.

Bombay Port Trust: The Hon'ble Mr. Malcolm N. Hogg, Mr. Meyer Nissim, Mr. Nigel F. Paton, Mr. A. H. Froom and Sir Thomas Birkett, Kt.

Bombay Municipality: Messrs. Malcolm N. Hogg (Forbes, Forbes, Campbell & Co., Ltd.) and Harry T. Gorrie (South British Insurance Co., Ltd.).

Advisory Board of Sydenham College of Commerce and Economics: Messrs. W. A. Haig Brown and J. S. Wardlaw Milne.

Bombay Smoke Nuisances Commission: The Hon. Mr. Malcolm N. Hogg.

St. George's Hospital Advisory Committee: Sir Stanley Reed, Kt., LL.D.

Special Work.

One of the most important functions performed by the Chamber is that of arbitration in commercial disputes. Rules for this have been in existence for many years and have worked most satisfactorily. The decisions are in all cases given by competent arbitrators appointed by the General Committee of the Chamber and the system avoids the great expense of resort to the Law Courts.

A special department of the Bombay Chamber is its Statistical Department, which prepares a large amount of statistical returns connected with the trade of the port and of great importance to the conduct of commerce. The department consists of eleven Indian clerks who, by the authority of Government, work in the Customs House and have every facility placed at their disposal by the Customs authorities. They compile all the statistical information in connection with the trade of the port, in both export and import divisions, which it is desirable to record. No other Chamber in India does similar work.

The Bombay Chamber publish a Daily Arrival Return which shows the receipts into Bombay of cotton, wheat and seeds, and a *Daily Trade Return, which deals with trade by sea and shows in great detail imports of various kinds of merchandise and of treasure, while the same return contains particulars of the movements of merchant vessels.

The Chamber publishes twice a week detailed reports known as *Import and *Export manifests, which give particulars of the cargo carried by each steamer to and from Bombay.

Three statements are issued once a month. *One shows the quantity of exports of cotton seeds and wheat from the principal ports of the whole of India. The second gives in detail imports from Europe, more particularly in regard to grey cloths, bleached cloths, Turkey red and scarlet cloths, printed and dyed goods, fancy cloth of various descriptions, woollens, yarns, metals, kerosine oil, coal, aniline dyes, sugar, matches, wines and other sundry goods. The third statement is headed, "Movements of Piece Goods and Yarn by Rail," and show the despatches of imported and local manufactured piece-goods and yarn from Bombay to other centres of trade served by the railways.

*The "Weekly Return" issued by the Chamber shows clearances of a large number of important descriptions of merchandise. A return of "Current Quotations" is issued once a week, on the day of the departure of the English mail, and shows the rates of exchange for Bank and Mercantile Bills on England and Paris, and a large quantity of general banking and trade information.

The annual reports of the Chamber are substantial tomes in which the whole of the

* The publication of these returns has been temporarily suspended by order of Government.

affairs of the Chamber and the trade of the port during the past year are reviewed.

The Chamber has also a Measurement Department with a staff of 15, whose business is that of actual measurement of exports in the docks before loading in steamers. Certificates are issued by these officers with the authority of the Chamber to shippers and ship agents as to the measurement of cotton and other goods in bales or packages. The measurers are in attendance on the quays whenever there are goods to be measured and during the busy season are on duty early and late. The certificates granted show the following details :—

(*a*) the date, hour and place of measurement;
(*b*) the name of the shipper;
(*c*) the name of the vessel;
(*d*) the port of destination;
(*e*) the number and description of packages;
(*f*) the marks;
(*g*) the measurement; and, in the case of goods shipped by boats,
(*h*) the registered number of the boat;
(*i*) the name of the tindal.

Bombay Millowners' Association.

The Bombay Millowners' Association was established in 1875 and its objects are as follow :—

(*a*) The protection of the interests of millowners and users of steam, water and/or electric power in India;

(*b*) The promotion of good relations between the persons and bodies using such power;

(*c*) The doing of all those acts and things by which these objects may be furthered.

Any individual partnership or company, owning one or more mill or mills or one or more press or presses or one or more ginning or other factory or factories actuated by steam, water, electric and/or other power is eligible for membership, members being elected by ballot. Every member is entitled to one vote for every complete sum of Rs. 50 paid by him as annual subscription.

The membership of the Association in 1918 numbered 100.

The following is the Committee for 1918 :—

C. N. Wadia, Esq. (*Chairman*), N. G. Hunt, Esq. (*Dy. Chairman*), The Hon. Sir Dinshaw M. Petit, Bart., Sir Sassoon David, Bart., The Hon. Sir Fazulbhoy Currimbhoy, Kt., C.B.E., The Hon. Sir Dinshaw E. Wacha, Kt., Sir Vithaldas D. Thackersey, Kt., The Hon. Mr. C. V. Mehta, The Hon. Mr. Munmohandas Ramji, Messrs. W. H. Brady, Rehimtoola Currimbhoy Ebrahim, A. Geddis, Mathradas Goculdas, Narottam M. Goculdas, Cowasjee Jehangir (*Jun.*), Meyer Nissim, Jehangir B. Petit, N. B. Saklatwalla and N. N. Wadia, C.I.E.

Mr R. E. Gregor-Pearse, *Secretary.*

The following are the Association's Representatives on public bodies :—

Legislative Council of H. E. the Governor of Bombay: The Hon'ble Sir Dinshaw M. Petit, Bart.

Bombay Port Trust: Sir Vithaldas D. Thackersey, Kt.

City of Bombay Improvement Trust: Sir Sassoon David, Bart.

Victoria Jubilee Technical Institute: Mr. Jehangir Bomanjee Petit.

Bombay Smoke Nuisances Commission: Messrs. C. N. Wadia and W. A. Sutherland.

Advisory Board of Sydenham College of Commerce and Economics: Mr. C. N. Wadia.

Indian Merchants' Chamber.

The Bombay Indian Merchants' Chamber and Bureau was established in 1907 with the following objects :—" To encourage a friendly feeling and unanimity among the commercial men on all subjects involving their common good; to promote and protect the trade, commerce and manufactures of India and in particular to promote the general commercial interests of the Presidency of Bombay; to consider and deliberate on all questions affecting the rights of Indian Merchants, to represent to the Government their grievances, if any, and to obtain by constitutional methods the removal of such grievances; to collect and compile and distribute in such manner as may be the most expedient for purposes of disseminating commercial and economic knowledge, all statistics and other information relating to trade, commerce and finance, specially India: as well as to form and maintain library, and generally to do all such matters as may promote the above objects in view; to arbitrate between parties willing to refer and abide by the judgment of the Chamber; to receive and decide references of matters of usage and custom in dispute, recording such decisions of future guidance and assisting by this and such other means, as the committee for the time being may think fit; to form a code of practice so as to simplify and facilitate the transaction of business."

The Chamber has not yet taken up the work of arbitration, measurements, etc.

The following bodies are connected directly and indirectly with the Chamber, though no public body is directly affiliated to it :—

The Bombay Native Piece-goods Association (which sends a large number of representatives);

The Grain Merchants' Association (which is a member);

The Hindustani Native Merchants' Association (which is a member);

The Bombay Country Tobacco Trade Association;

The Bombay Rice Merchants' Association;

The Bombay Fancy Piece-goods Association;

The Bombay Yarn, Copper and Brass Native Merchants' Association.

The Chamber elects a representative jointly with the Bombay Native Piece-goods Merchants' Association to the Bombay Legislative Council and a representative to the Board of Trustees for the Port of Bombay, whenever it is notified by the Government (*vide* Act No. 1 of 1909). The Chamber also has the right to elect a representative on the Board of the Sydenham College of Commerce and Economics, Bombay.

Any person engaged in mercantile pursuits or interested in trade and commerce desirous of joining the Chamber is eligible for membership, there being two classes of members, *viz.*, Ordinary and Honorary. Ordinary members shall be (1) Resident members who pay Rs. 30 annual fee, except that if an Association joins as a member it shall have to pay an annual fee of Rs. 100, and (2) Mofussil members who pay Rs. 5 as annual fee. An ordinary member also pays an entrance fee of Rs. 50 on being elected.

Gentlemen distinguished for public services or eminent in commerce and manufactures or otherwise interested in the aims and objects of the Chamber may be elected as Honorary members by a General Meeting of the Chamber on the recommendation of the Committee and as such are exempted from paying subscriptions. They are not entitled to vote at any meeting of the Chamber nor they are eligible to serve on the Committee. They are, however, supplied all the publications of the Chamber free of charge.

The following are the Officers of the Chamber for the year 1918-19 :—

Chairman.—The Hon. Mr. Chunilal V. Mehta.

Vice-Chairman.—Mr. Jehangir B. Petit.

Committee.—The Hon. Mr. Munmohandass Ramji, The Hon. Mr. Lallubhoy S. Mehta, Mr. Jamnadas Dwarkadas, The Hon. Sir Fazulbhoy Currimbhoy, Kt., C.B.E., The Hon. Mr. Purshottamdas Thakoredas, Sir Vithuldas D. Thackersey, Mr. Hansraj Pragji Thackersey, The Hon. Sir D. E. Wacha, Mr M. Subedar, Mr. Devidas Madhavji Thackersey, Mr. W. T. Halai, Sir Shapoorji B. Broacha, Mr. Motilal Vallabhaji, Mr. Motilal Kanji, Mr. Gulabchand Devchand Zaveri, Mr. S. E. Warden, Mr. Mulji Haridas, Mr. Narandas Purshottam, Mr. Mathuradas Vasanji, Mr. Phiroz J. Bilimoria, Mr. Ravashanker Jagjivan, Mr. Chaturbhuj Shivji, Mr. Laxmidas R. Tairsee, Mr. Naranji Haribhoy, Mr. S. B. Bilimoria, Mr. Laxmichand Manekchand Khokhani.

Secretary.—Mr. J. K. Mehta, M.A.

The following are the Chambers' representatives on various public bodies :—

Bombay Legislative Council.—The Hon. Mr. Munmohandass Ramji.

Advisory Board of the Sydenham College of Commerce.—The Hon. Sir D. E. Wacha.

The staff of the Chamber include :—

Secretary.—Mr. J. K. Mehta, M.A.

Asst. Secretary.—Mr. K. M. Desai, B. Com.

Hony. Auditor.—Mr. Devidas Vithaldas.

Solicitors :—Messrs. Edgelow, Gulabchand, Wadia & Co.

The Chamber publishes every month a journal in Gujarati giving information on commercial and industrial subjects and publishing all statistics considered important relating to trade and commerce of India.

Cotton Trade Association.

The Bombay Cotton Trade Association, Limited, was founded in 1876. The objects for which it was established were, *inter alia*, "to adjust disputes between persons engaged in the cotton trade, to establish just and equitable principles in the trade, to maintain uniformity to rules, regulations and usages in the trade, to adopt standards of classification in the trade, to acquire, preserve and disseminate useful information connected with the cotton interests throughout all markets and generally to promote the cotton trade of the City of Bombay and India and augment the facilities with which it may be conducted." In 1892 the Association was incorporated under the Indian Companies Act, 1882, with a Capital of Rs. 50,000, in 50 shares of Rs. 1,000 each. In 1917 the share capital was increased to Rs. 60,000. In addition to the shareholders (Members), the Association had in 1918 126 Associate Members. The affairs of the Company are managed by a Board of Directors not less than nine or more than twenty in number. The present Directorate is constituted as follows :—

Chairman.—Mr. T. D. Moore (New Mofussil Co., Ltd.).

Deputy Chairman.—James P. Chrystal (P. Chrystal & Co.)

Messrs. J. L. Ainsworth (Gill & Co.), Anandilal Ishwardas (Anandilal Ishwardas & Co.), G. Boyagis (Ralli Brothers), H. F. Bush (The Bombay Co. Ltd.), C. W. du Breul (Breul & Co.), K. Futamura (Gosho Kabushike Kaisha), J. Muller (Volkart Brothers), The Hon'ble Mr. Purshottamdas Thakoredas (Narandas Rajaram & Co.), C. H. Roberts (Prier de Saone & Co.), Ramnarain Harnandrai (Harnandrai Ramnarain), N. B. Saklatwala (Tata Sons & Co.), N. Takeuchi (Mitsui Bussan Kaisha, Ltd.), Vassonjee Jeewandas (Khimjee Visram, C. N. Wadia (The Century Spinning & Weaving Co., Ltd.).

Secretary.—Mr. Noel Wilkinson, B.A., F.I.S.A.

Bombay Native Piece-Goods Merchants' Association.

The objects of the Association are as follow:—

(*a*) To promote by creating friendly feelings and unity amongst the Merchants, the business of the piece-goods trade in general at Bombay, and to protect the interest thereof; (*b*) to remove, as far as it will be within the powers of the Association to do so, all the trade difficulties of the piece-goods business and to frame such line of conduct as will facilitate the trade; (*c*) to collect and assort statistics relating to piece-goods and to correspond with public bodies on matters affecting trade, and which may be deemed advisable for the pro-

tection and advancement of objects of the Association or any of them; and (*d*) to hear and decide disputes that may be referred to for arbitration.

The following are the office-bearers for the current year:—

Chairman—The Hon. Mr. Manmohandas Ramji.

Deputy Chairman.—Mr. Devidas Madhavji Thakersey, J.P.

Hon. Joint Secretaries.—Messrs. Lalji Govindji and Goculdas Jivraj Dayal.

Hony. Treasurer.—Mr. Mathuradas Haridas.

Grain Merchants' Association.

The object of this body is "to promote the interests of the merchants and to put the grain and seeds trade on a sound footing." It is an influential body of large membership. The office holders for the current year are as follow:—

Chairman—Mr. Velji Lakhamsi, B.A., LL.B.

Vice-Chairman—Mr. Dharsi Khetsi (Messrs. Talockchand Mauraj).

Hony. Secretary—Mr. Pragji Mohonji Kothari.

Secretary—Mr. Lalshanker Harprasad.

KARACHI.

The objects and duties of the Karachi Chamber are set forth in terms similar to those of Bombay. Qualifications for membership are also similar. Honorary membership is conferred upon "any gentlemen interested in the affairs and objects of the Chamber", subject to election by the majority of the votes of members. All new members joining the Chamber pay Rs. 100 entrance fee and the monthly subscriptions is Rs. 6 for any member contributing Rs. 600 to the Chamber Fund, in addition to entrance fee, and Rs. 12 without such contribution. The subscription for the Chamber's periodical returns is Rs. 5 per month. The affairs of the Chamber are managed by a committee of ten members, consisting of a Chairman, Vice-Chairman and eight members, elected at the annual meeting of the Chamber in January or immediately after. The Chamber elects a representative on the Bombay Legislative Council and three representatives on the Karachi Port Trust. There were last year 56 members of the Chamber, and 7 Honorary Members.

The following are the officers of the Chamber for the current year:—

Chairman.—The Hon'ble Mr. M. de P. Webb, C.I.E. (Forbes Forbes Campbell & Co., Ld.).

Vice-Chairman.—Mr. W. U. Nicholas (Anderson & Co.).

Managing Committee.—Messrs. L. Brachi (James Finlay & Co., Ld.), F. Clayton (Fleming Shaw & Co.), C. C. Demetriadi (Ralli Brothers), W. P. Freeman (North-Western Railway), Geo. Gordan (Chartered Bank of India, Australia & China), H. G. Houghton (Donald Graham & Co.), H. H. Sawyer (David Sassoon & Co., Ld), and S. C. Woodward (Clements, Robson & Co.).

Representative on the Bombay Legislative Council—The Hon. Mr. M. de P. Webb, C.I.E., C.B.E.

Representative on the Karachi Port Trust—Mr. J. R. Baxter, Mr. E. A. Pearson and Mr. S. C. Woodward.

Secretary—Mr. E. L. Rogers.

Public Measurer—Captain S. Mylcrist.

The following are the principal ways in which the Chamber gives a special assistance to members. The Committee take into consideration and give an opinion upon questions submitted by members regarding the custom of the trade or of the Port of Karachi. The Committee undertake to nominate European surveyors for the settlements of disputes "as to the quality or condition of merchandise as to the quality in which both parties desire the Chamber to do so." When two members of the Chamber or when one member and a party who is not a member have agreed to refer disputes to the arbitration of the Chamber or of an arbitrator or arbitrators nominated by the Chamber, the Committee will undertake to nominate an arbitrator or arbitrators, under certain regulations. A public measurer is appointed under the authority of the Chamber to measure pressed bales of cotton, wool, hemp, hides and other merchandise in Karachi.

MADRAS.

The Madras Chamber of Commerce was founded in 1886. All merchants and other persons engaged or interested in the general trade, commerce and manufactures of Madras are eligible for membership. Any assistant signing a firm or signing *per pro* for a firm is eligible. Members who are absent from Madras but pay their subscriptions may be represented in the Chamber by their powers-of-attorney, as honorary members, subject to ballot. Honorary members thus elected are entitled to the full privilege of ordinary members. Election for membership is by ballot at a general meeting, a majority of two-thirds of the recorded votes being necessary to secure election. Every member pays an entrance fee of Rs. 100, provided that banks, corporate bodies and mercantile firms may be represented on the Chamber by one or more members and are liable for an entrance fee of Rs. 100 once in ten years each. The subscription shall not exceed Rs. 160 per annum, payable quarterly in advance, subject to reduction from time to time in accordance with the state of the Chamber's finances. Absentees in Europe pay no subscription and members temporarily absent from Madras pay one rupee per month. Honorary members are admissible to the Chamber on the usual conditions. Members becoming insolvent cease to be members but are eligible for re-election without repayment of the entrance donation.

The Chamber undertakes arbitrations and surveys, the granting of certificates of origin and the registration of trade marks. One of the rules for the last named is "that no trade mark on ticket shall be registered on behalf of an Indian firm trading under a European name."

The following publications are issued by the Chamber:—Madras Price Current and Market Report, Tonnage Schedule and Madras Landing Charges and Harbour Dues Schedule.

There are 40 members and five honorary members of the Chamber in the current year and the officers and committee for the year are as follows:—

Chairman.—The Hon'ble Sir Gordon Fraser.

Vice-Chairman—Sir Bernard Hunter.

Committee.—Mr. A. J. Leech, Mr. H. P. M. Rae, Mr. A. P. Symonds, Mr. F. E. L. Worke, Mr. F. B. Wathen.

Secretary.—Mr. W. D. St. Leger.

The following are bodies to which the Chamber are entitled to elect representatives, and the representatives elected for the year:—

Madras Legislative Council.—The Hon'ble Sir Gordon Fraser.

Madras Port Trust.—The Hon'ble Sir Gordon Fraser (Messrs. Best & Co., Ld.), Mr. H. P. M. Rae (The Bombay Co., Ld.), Mr. J. F. Simpson (Messrs. Gordon Woodroffe & Co.), Mr. A. P. Symonds (Messrs. Binny & Co., Ld.). Mr. R. Todd (Madras & Southern Mahratta Railway Co., Ld.), Mr. A. Muirhead, C.I.E. (The South Indian Railway Co., Ld.), Mr. J. H. Thonger (Madras Trades' Association).

Madras Municipal Corporation.—Mr. A. J. Leech (Messrs. T. A. Taylor & Co.), Mr. A. P. Symonds (Messrs. Binny & Co., Ld.), A. J. Powell (Madras Electric Tramway Co., Ld.).

Nominated by Government.—The Hon'ble Sir Gordon Fraser (Best & Co., Ld.), Mr. J. W. Crusha (Wilson & Co.).

British Imperial Council of Commerce, London—Mr. A. J. Yorke (in Europe).

Indian Tea Cess Committee.—Mr. J. C. Armstrong (Parry & Co.).

Southern India Chamber.

The Southern India Chamber of Commerce has its Registered Office in Madras. The objects of the Chamber are those usual for such bodies, concerning the promotion of trade, especially in the Madras Presidency, and the interests of members. Special objects are stated to be:—

"To maintain a Library of books and publications of commercial interest, so as to diffuse commercial information and knowledge amongst its members.

"To establish Museums of commercia products or organise exhibitions, either on behalf of the Chamber or in co-operation with others."

There are two classes of members, permanent and honorary. The usual conditions as to eligibility for election prevail.

The right of electing two representatives to the Madras Port Trust was accorded to the Chamber by the Madras Port Trust Amendment Act, 1915. Members of the Chamber hold seats in the Madras Legislative Council and in the Madras Corporation, but the Chamber does not enjoy the right of electing representatives to these bodies.

President—Rao Bahadur P. Theagaroya Chettiar, B.A.

Vice-Presidents—Khan Bahadur M. A. Kuddus Badsha Sahib and Dewan Bahadur Govindoss Chathurbhoojadoss.

Honorary Secretaries—M. R. Ry. M. Venngopala Naidu and Moulana Abdus Subhan Sahib.

Asst. Secretary—C. Duraiswami Aiyangar B.A.

UPPER INDIA CHAMBER.

The Upper India Chamber of Commerce is concerned with trade, commerce and manufactures in the United Provinces and has its registered office at Cawnpore. Members are elected by the Committee, subject to confirmation by the next general meeting of the Chamber. Honorary members are elected on the usual qualifications, but can neither serve in the Committee nor vote at meetings of the Chamber. There is no entrance fee for membership, but subscriptions are payable as follows:—A firm, company or association having its place of business in Cawnpore, Rs. 200 a year; an individual member, resident or carrying on business in Cawnpore, Rs. 100; firms or individuals having their places of business or residence outside Cawnpore pay half the above rates, but the maintenance of a branch office in Cawnpore necessitates payment of full rates.

The affairs and funds of the Chamber are managed by a Committee of ten members, which has power to constitute Local Committees, of from four to seven members each, at trade centres where membership is sufficiently numerous to justify the step. Such Local Committees have power to communicate only with the Central Committee.

The Chamber appoints arbitration Tribunals for the settlement and adjustment of disputes when invited to do so, members of the Tribunals being selected from a regular printed list of arbitrators.

The Chamber has in the present year 65 members, four honorary members and five affiliated members.

The following are the officers:—

President—The Hon. Mr. Thomas Smith (Muir Mills Co., Ltd.)

Vice-President—Mr. T. D. Eidelston (Begg Sutherland & Co.).

Members.—Sir Logie P. Watson, Messrs. T Gavin Jones (Empire Eng. Co., Ltd.), S. H. Taylor Elgin Mills Co., Ltd.), A W. Lilley (Cawnpore Woollen Mill Co., Ltd.), B. R. Briscoe (Cawnpore Cotton Mills Co., Ltd.), E.L. Watson (D Waldie & Co, Ltd.), Babu Ram Narai (Budridas Ram Narain), Mr. C. L. Taylor (O. & R. Railway).

Secretary.—Mr. J. G. Ryan.

Head Clerk.—Mr. B. N. Ghosal.

PUNJAB.

The Punjab Chamber of Commerce has its headquarters at Delhi and exists for the care of mercantile interests on the usual lines in the Punjab, the North-West Frontier Province and Kashmir. There are affiliated branches of the Chamber at Lahore and Amritsar. Members are elected by ballot, the only necessary qualification being interest in merca tile pursuits. There is no entrance fee. The rate of subscription is Rs. 10 per month. The Chamber returns one member to a seat on the Punjab Legislative Council and one on the Municipal Corporation, Delhi.

The following are the Officers, Committee and Representatives on public bodies as at the end of November 1918:—

President—The Hon'ble Mr. James Currie (Messrs. James Currie & Co.).

Vice-President.—Lala Girdhari Lall (Amritsar Flour and General Mills Co., Ltd.)

Committee.—Mr. R. E. Grant Govan (The Delhi Flour Mills Co., Ld.), Mr. V. F. Gray (Messrs. R. J. Wood & Co.), Mr. D. N. Bhanja (Messrs. Kerr Tarruck & Co.), Mr. H. H. Yule (East Indian Railway), Mr. W. A. Whyte (Allahabad Bank, Ld.), Mr. P. B. Christo (Messrs. Christo & Co.), Lala Motiram Mehra (Messrs. Motiram Mehra & Co.), Lala L. D. Lachmi Narain, R. B. Lala Ramsaran Dass, C.I.E. (Messrs. Mela Ram & Sons' Cotton Mills),

Representative on Punjab Legislative Council—The Hon'ble Mr. James Currie.

Representative on the Delhi Municipal Committee—Mr. R. E. Grant Govan (The Delhi Flour Mills Co., Ltd.)

Secretary—Mr. J. Renton Denning, F.R.S.A.

The Chamber is affiliated with the British Imperial Council of Commerce, London, and is represented in England by Sir James Walker, Alliance Bank of Simla, and Mr. H. C. Chalmers, National Bank of India, Ltd, London.

UNITED PROVINCES.

A meeting of Indians engaged or interested in the trade and industry of the United Provinces was held at Cawnpore in February 1914 to inaugurate an Indian Chamber for the United Provinces. Representatives of firms in Cawnpore, Benares, Allahabad, Lucknow, Fyzabad and other places were present. It was unanimously resolved to establish a United Provinces Chamber of Commerce with its headquarters at Cawnpore. The Chamber has been registered under the Indian Companies Act and has been recognised by the Provincial Government, which has granted the privilege of nominating two members of the Chamber to the Cawnpore Municipal Board. The total number of members of the Chamber in 1917 was 79.

The following are the office holders of the Chamber appointed in 1917:

President—R. B. Lala Bishamber Nath Sahib (Ram Ratan Ram Gopal, Proprietor, Sri Krishna Ginning Factory. Director, Punjab National Bank Ld., Cawnpore).

Vice-Presidents—The Hon'ble Mr. C. Y. Chintamani (Allahabad), B. Alakh Dhari Sahib (Inspector-General of Commerce and Industry, Gwalior), L. Kamlapat (Baijnath Juggilall, Cawnpore).

Hony. Secretary—B. Vikrmajit Singh Sahib (Director, Punjab National Bank Ld. and the Newspapers Limited), Messrs. Ramchandra Gur Sahai (Mull Cotton Mills Co. Ltd., Cawnpore).

Hony. Joint Secretary—Mr. B. N. Sen (Merchant, Cawnpore). These officers together are the Managing Committee.

BURMA.

The Burma Chamber of Commerce, with headquarters at Rangoon, exists to encourage friendly feeling and unanimity among commercial men on all subjects involving their common good, to promote and protect trade, commerce and manufactures and, in particular, the general mercantile interests of the province, to communicate with public authorities, associations and individuals on all matters, directly or indirectly affecting these interests, and to provide for arbitration between parties willing to refer to, and abide by, the judgment of arbitrators appointed by the Chamber. The following are affiliated bodies:—

Burma Fire Insurance Association.
Burma Marine Insurance Agents' Association.
Rangoon Import Association.
Tavoy Chamber of Mines.

The Chamber elects representatives to the following Public Bodies:—

Burma Legislative Council.
Rangoon Port Trust Board.
Rangoon Municipal Committee.
Victoria Memorial Park Trustees.
Pasteur Institute Committee.
Burma Boiler Commission.

All British corporations, companies, firms or persons engaged or interested in mercantile pursuits, such as merchants, bankers, shipowners and brokers or who are connected with agriculture, mining, manufactures, insurance, railways, commerce, art, science or literature shall be eligible to become Chamber Members. Every non-British concern or person, similarly engaged or interested as indicated above, other than a subject of a State with which the British Empire was at War on September 19th, 1918, shall be eligible for election as an Associate Member. The annual subscription of each Chamber Member shall be Rs. 240 per annum and of each Associate Member Rs. 180 per annum. Officials

and others indirectly connected with the trade of the province, or who may have rendered distinguished service to the interests represented by the Chamber, may be elected by the Committee, either on their own motion or on the suggestion of two Members as Honorary Members of the Chamber. Honorary Members are not required to subscribe to the funds of the Chamber.

The Chamber undertakes arbitrations in addition to its ordinary work. It does not publish any statistical returns.

The following are the Officers, Committee and Representatives on public bodies for the current year :—

Chairman.—The Hon. Mr. E. O. Anderson (Bulloch Bros. & Co., Ld.).

Vice-Chairman.—W. Buchanan, Esq. (Messrs. Finlay, Fleming & Co.).

Committee.—Messrs. E. J. Holberton (Bombay-Burma Trading Corpn., Ltd.); H. B. Huddleston, O.B.E. (Burma Railways), A. R. Finlay (J. A. Begbie & Co.), J. Hogg (Messrs. Harperink, Smith & Co.), J. Smith (National Bank of India, Ld.), J. A. Polson (The Irrawaddy Flotilla Co., Ltd.), J. A. Swan (Steel Brothers & Co., Ld.), G. Whigham (Burma Oil Co., Ld.).

Secretary—Mr. C. A. Cuttriss.

Representative on the Burma Legislative Council—The Hon'ble Mr. E. O. Anderson.

Representatives on the Rangoon Port Trust Board—Messrs. D. Robertson, W. Buchanan, J. A. Polson and J. A. Swan.

Representative on the Rangoon Municipal Committee—Mr. G. Whigham.

Victoria Memorial Park Trustee—The Hon'ble Mr. E. O. Anderson.

Pasteur Institute Committee.—The Hon'ble Mr. E. O. Anderson.

Burma Boiler Commission.—Mr. H.H. Gallie (Bulloch Bros. & Co., Ltd.).

COCANADA.

The Cocanada Chamber of Commerce was established on 29th October, 1868.

The following are the office-holders of the Cocanada Chamber of Commerce, which has its headquarters at Cocanada, the chief port on the Coromandel Coast, north of Madras :—

Messrs. B. Eddington (Coromandel Co., Ltd.), *Chairman*; E. H. D'Cruz (Wilson & Co.), A. E. Todd (Simson Bros.), M. R. Ry. Rao Bahadur K. Suryanarayanamurty Naidu Garu and G. M. Lake (Innes & Co.), G. W. Thompon (Shaw Wallace & Co.), R. J. Hunter (Ripley and Co.), A. Steiner (Volkart Bros.), and C. D. Shore (Gordon Woodroffe & Co.).

Secretary—Mr. J. A. Muller.

The rules of the Chamber provide "that by the term 'member' be understood a mercantile firm or establishment, or the permanent agency of a mercantile firm or establishment, or a society of merchants carrying on business in Cocanada, or other place in the Districts of Kistna, Godavari, Vizagapatam, and Ganjam, and duly electing according to the Rules of the Chamber, and that all such be eligible, but only members resident in Cocanada can hold office."

Members are elected by ballot. The Committee, when called upon by disputing members or non-members of the Chamber, give their decision upon all questions of mercantile usage and arbitrate upon any commercial matter referred to them for final judgment. In the former case a fee of Rs. 16 and in the latter a fee of Rs. 32 must accompany the reference.

The Committee consist of 3 members, including the Chairman, and the Committee are elected by ballot, the Chairman at the general meeting of January in each year, for a term of 12 months. The entrance fee for each member whose place of business is in Cocanada is Rs. 50 and for each member whose place of business is elsewhere be Rs. 25. The subscription for each member whose place of business is in Cocanada is Rs. 120 per annum, and for each member whose place of business is elsewhere be Rs. 60 per annum, payable quarterly in advance. Committee meetings are held on the 1st Tuesday in the month and general meetings on the 2nd Tuesday.

A weekly slip of current rates of produce freights, and exchange is drawn up by the Committee.

CEYLON.

The Ceylon Chamber of Commerce was established on the 25th March 1839 and was incorporated in 1895, with its headquarters at Colombo. All firms and persons engaged in the general trade of Ceylon are admissible as members and every person or firm desirous of joining the Chamber must be proposed by one member, seconded by another and balloted for by the whole Chamber. The affairs of the Chamber are conducted by a Board of Directors consisting of Chairman and Vice-Chairman and from 5 to 10 members.

The following is the membership of this Board at the present time :—

Mr. J. Lochore (*Chairman*); Mr. F. E. Mackwood (*Vice-Chairman*); Mr. M. J. Cary, Mr. E. S. Clark, Mr. W. Fraser, Mr. E. H. Lawrence, Mr. R. S. Philpott, Mr. W. Philps, Mr. W. Sutherland Ross, and Mr. D. W. Watson.

Secretary.—Mr. A. Duncum.

THE INDIAN INDUSTRIAL CONFERENCE.

The credit of conceiving the idea of organizing an Indian Industrial Conference under the auspices of the Industrial Association of Western India belongs to the late Mr. M. G. Ranade. Discussion of questions relating to agriculture, finance, commerce and industry of the whole country by inviting experts in different branches, the formation of well informed public opinion on economical problems were the objects kept by Mr. Ranade in view in convening this meeting. The first session of the Conference was held at Poona in August 1891, under the Presidency of Captain Beauclerk of Hyderabad and was attended by distinguished European and Indian gentlemen. Two more sessions of the Conference were held in 1892 and 1893. But owing to the elevation of Mr. M. G. Ranade to the High Court and his transfer to Bombay, this movement came virtually to a standstill, until it was revived in 1905. The National Congress almost since its inception has given prominent attention to some of the principal economic questions and the famines of 1896-97 and 1899-1900 contributed not a little to push the economical problem to the forefront and resulted in the organization of three or four Industrial and Agricultural exhibitions between 1900 and 1905 under the auspices of the National Congress, which gave the people an opportunity to take stock of their gains and losses in the field of arts and industries and opened their eyes to their industrial backwardness. Small committees were appointed at these exhibitions to devise means for the revival of existing industries and also for the starting of new ones.

In the year 1905 the exhibition Committee of Benares took the important step of reviving the Industrial Conference organization. The first session was accordingly held under the distinguished presidency of the late Mr. R. C. Dutta. The following is the list of

Ex-Presidents:—	YEAR.
Late Mr. R. C. Dutt, C.I.E., Baroda ..	1905
The Hon'ble Sir Vithaldas D. Thackersey, Kt., Bombay	1906
Late Mr. Ambalal Sakerlal Desai, Ahmedabad	1907
The Hon'ble Rao Bahadur R. N. Mudholker, C.I.E., Amraoti	1908
Maharaja Sir Rameshwar Singh Bahadur, Durbhanga	1909
Sir R. N. Mookerjee, K.C.I.E., Calcutta.	1910
Hon'ble Mr. M. B. Dadabhoy, C.I.E., Nagpur	1911
Lala Harkishen Lal, Lahore	1912
Hon'ble Mr. Lalubhai Samaldas, C.I.E., Bombay	1913
Hon'ble Mr. Manmohandas Ramji, J.P., Bombay	1914
Sir Dorabji J. Tata, Kt., Bombay ..	1915
Hon'ble Rai Sitanath Roy Bahadur, Calcutta	1916
V. P. Madhao Rao, Esq., C.I.E., Bangalore	1917
Mr. Jehangir B. Petit	1918

Constitution.—The objects of the Conference as laid down in the constitution are as follows :—

The promotion and development of agriculture, manufactures and trade of India on sound lines, by holding conferences and meetings, by issuing books, papers, pamphlets or leaflets, by arranging, whenever possible for exhibitions, demonstrations, experiments, etc., by encouraging the study of technology, by making representations to Government and to the Rulers of Indian States on all matters pertaining to or bearing on agriculture, manufactures and trade.

In pursuance of these objects, 14 sessions of the Conference have been held along with the annual Congress meetings. Each Report covers over 500 pages of closely printed matter. The office also has compiled the following books:— The Directory of Indian Goods and Industries (6th Edition under preparation) containing the names and addresses of manufacturers of and dealers in the Indian made goods, Indian Banks, etc. The Directory of Technical Institutions in India (2nd edition) gives the fees charged and other particulars relating to Agricultiural, Commercial and Technical schools and colleges in India. The Guide to Modern Machinery gives the addresses of makers of machinery for starting three hundred different industries.

In addition to the educative work, the office fulfils the functions of a **Bureau of Economic Intelligence.** Inquiries of the following nature are received in the office. Small capitalists and gentlemen of limited means seek the advice of the Central Office for starting small cottage industries, which do not require a large outlay of money or the use of expensive or intricate machinery. Persons wishing to start soap or candle works, varnish making and similar chemical industries, ask for an estimate of the cost of machinery and plant for these different concerns, as well as rates for the chemicals required by them and the names of the firms from whom they can obtain the supplies. Advice is sometimes sought by Indian States and private individuals anxious to start plantations of Ramie, and other fibre producing plants and the cultivation of Rubber and other economic products. Parents and guardians of students have addressed the Office for information in connection with institutions both in India and in foreign countries, where the young men can get training suited to them in Electrical Engineering and other technical courses. Information is also supplied regarding Indian experts in various branches. Small concerns which have already commenced to place their goods in the market, expect the Office of the Industrial Conference to help them in pushing forward the sale of their goods by prevailing upon well-known merchants, to help them by guaranteeing the purchase of their goods up to a certain quantity every year

The rates of subscription for the different classes of membership are given below :—

Patron	Rs. 2,000 and above
Life Members, class A ..	„ 500 to 2,000
Life Members, class B ..	„ 250 to 500
Ordinary Members ..	„ 5 to 250

OFFICE BEARERS:—*Honorary Joint Secretaries,* Rao Bahadur R. N. Mudholkar, C.I.E., Hon'ble Mr. Manmohandas Ramji, J.P. Mr. Ambala Sarabha, Lala Harkishen Lal.

Assistant Secretary, Mr. M. B. Sant.

Office 23, Churchgate Street, Fort, Bombay.

* The Peoples of India.

It is essential to bear in mind, when dealing with the people of India, that it is a continent rather than a country. Nowhere is the complex character of Indians more clearly exemplified than in the physical type of its inhabitants. No-one would confuse the main types, such as Gurkhas, Pathans, Sikhs, Rajputs, Burmans, Nagas, Tamils, etc., nor does it take long to carry the differentiation much farther. The typical inhabitants of India–the Dravidians–differ altogether from those of Northern Asia, and more nearly resemble the tribes of Malaya, Sumatra and Madagascar. Whatever may be their origin, it is certain that they have settled in the country for countless ages and that their present physical characteristics have been evolved locally. They have been displaced in the North-West by successive hordes of invaders, including Aryans, Scythians, Pathans and Moghals, and in the North-East by Mongoloid tribes allied to those of Burma, which is India only in a modern political sense. Between these foreign elements and the pure Dravidians is borderland where the contiguous races have intermingled.

The people of the Indian Empire are divided by Sir Henry Risley (Caste, Tribe and Race, Indian Census Report, 1901; the Gazetter of India, Ethnology and Caste, Volume I, Chapter 6) into seven main physical types. There would be eight if the Andamese were included, but this tiny group of Negritos may be disregarded.

The Turko-Iranian, represented by the Baloch, Brahui and Afghans of Baluchistan and the North-West Frontier Province. Probably formed by a fusion of Turki and Persian elements, in which the former predominate. Stature above mean; complexion fair; eyes mostly dark, but occasionally grey; hair on face plentiful; head broad; nose moderately narrow, prominent, and very long. The feature in these people that strikes one most prominently is the portentious length of their noses, and it is probably this peculiarity that has given rise to the tradition of the Jewish origin of the Afghans.

The Indo-Aryan occupying the Punjab, Rajputana, and Kashmir, and having as its characteristics members the Rajputs, Khattris, and Jats. This type, which is readily distinguishable from the Turko-Iranian, approaches most closely to that ascribed to the traditional Aryan colonists of India. The stature is mostly tall; complexion fair; eyes dark; hair on face plentiful, head long; nose narrow, and prominent, but not specially long.

The Scytho-Dravidian, comprising the Maratha Brahmans, the Kunbis, and the Coorgs of Western India. Probably formed by a mixture of Scythian and Dravidian elements. This type is clearly distinguished from the Turko-Iranian by a lower stature, a greater length of head, a higher nasal index, a shorter nose, and a lower orbito-nasal index. All of these characters, except perhaps the last, may be due to a varying degree of intermixture with the Dravidians. In the higher groups the amount of crossing seems to have been slight; in the lower the Dravidian elements are more pronounced.

The Aryo-Dravidian or Hindustani, found in the United Provinces, in parts of Rajputana, and in Bihar and represented in its upper strata by the Hindustani Brahman and in its lower by the Chamar. Probably the result of the intermixture, in varying proportions, of the Indo-Aryan and Dravidian types. The head-form is long with a tendency to medium; the complexion varies from lightish brown to black; the nose ranges from medium to broad, being always broader than among the Indo-Aryans; the stature is lower than in the latter group, and usually below the average according to the scale. The higher representatives of this type approach the Indo-Aryans, while the lower members are in many respects not very far removed from the Dravidians. The type is essentially a mixed one, yet its characteristics are readily definable, and no one would take even an upper class Hindustani for a pure Indo-Aryan or a Chamar for a genuine Dravidian. The distinctive feature of the type, the character which gives the real clue to its origin and stamps the Aryo-Dravidian as racially different from the Indo-Aryan is to be found in the proportions of the nose.

The Mongolo-Dravidian, or Bengali type of Lower Bengal and Orissa, comprising the Bengal Brahmans and Kayasthas, the Mahomedans of Eastern Bengal, and other groups peculiar to this part of India. Probably a blend of Dravidian and Mongoloid elements, with a strain of Indo-Aryan blood in the higher groups. The head is broad; complexion dark; hair on face usually plentiful; stature medium; nose medium, with a tendency to broad. This is one of the most distinctive types in India, and its members may be recognised at a glance throughout the wide area where their remarkable aptitude for clerical pursuits has procured them employment. Within its own habitat the type extends to the Himalayas on the north and to Assam on the east, and probably includes the bulk of the population of Orissa; the western limit coincides approximately with the hilly country of Chota Nagpur and Western Bengal.

The Mongoloid, type of the Himalayas, Nepal, Assam, and Burma, represented by the Kanets of Lahul and Kulu; the Lepchas of Darjeeling and Sikkim; the Limbus, Murmis and Gurungs of Nepal; the Bodo of Assam; and the Burmese. The head is broad; complexion dark, with a yellow tinge; hair on face scanty; stature short or below average; nose fine to broad; face characteristically flat; eyelids often oblique.

The Dravidian type extending from Ceylon to the valley of the Ganges, and pervading Madras, Hyderabad, the Central Provinces, most of Central India and Chota Nagpur. Its most characteristics representatives are the Paniyans of Malabar and the Santals of Chota Nagpur. Probably the original type of the population of India, now modified to a varying extent by the admixture of Aryan, Scythian, and Mongoloid elements. In typical specimens the stature is short or below mean; the complexion very dark, approaching black; hair plentiful, with an occasional tendency to curl; eyes dark; head long; nose very broad, sometimes depressed at the root, but not so as to make the face appear

* The material in this section is almost entirely taken from the Report on the Census of India, 1911, by Mr. E. A. Gait, C.S.I., C.I.E., I.C.S., Fellow of the Royal Statistical Society.

flat. This race, the most primitive of the Indian types, occupies the oldest geological formation in India, the medley of forest-clad ranges, terraced plateau, and undulating plains which stretches roughly speaking, from the Vindhyas to Cape Comorin. On the east and the west of the peninsular area the domain of the Dravidian is conterminous with the Ghats, while further north it reaches on one side to the Aravallis, and on the other to the Rajmahal Hills. Where the original characteristics have been unchanged by contact with Indo-Aryan or Mongoloid people, the type is remarkably uniform and distinctive. Labour is the birthright of the pure Dravidian whether hoeing tea in Assam, the Duars, of Ceylon, cutting rice in the swamps of Eastern Bengal or doing scavenger's work in the streets of Calcutta, Rangoon and Singapore, he is recognizable at a glance by his black skin, his squat figure, and the negro-like proportions of his nose. In the upper strata of the vast social deposit which is here treated as Dravidian these typical characteristics tend to thin and disappear, but even among them traces of the original stock survive in varying degrees.

It must, however, be clearly understood that the areas occupied by these various types do not admit of being defined as sharply as they must be shown on an ethnographic map. They melt into each other insensibly; and, although at the close of a day's journey from one ethnic tract to another, an observer whose attention had been directed to the subject would realise clearly enough that the physical characteristics of the people had undergone an appreciable change, he would certainly be unable to say at what particular stage in his progress the transformation had taken place.

Contrasts.—The linguistic survey has distinguished in India about a hundred and thirty indigenous dialects belonging to six distinct families of speech. In the domain of religion, though the bulk of the people call themselves Hindus there are millions of Mahomedans, Animists, Buddhists, Jains, Sikhs, and Christians. So also in respect of social customs. In the north near relatives are forbidden to marry; but in the south cousin marriage is prescribed and even closer alliances are sometimes permitted. As a rule, female chastity is highly valued, but some communities set little store by it, at any rate prior to marriage, and others make it a rule to dedicate one daughter to a life of religious prostitution. In some parts the women move about freely; in others they are kept secluded. In some parts they wear skirts; in others trousers. In some parts again wheat is the staple food; in others rice, and in others millets of various kinds. All stages of civilisation are found in India. At one extreme are the land-holding and professional classes, many of whom are highly educated and refined; at the other various primitive aboriginal tribes such as the head-hunting Nagas of Assam and the leaf-clad savages of the southern hills who subsist on vermin and jungle products.

MAIN STATISTICS OF THE INDIAN EMPIRE.

According to the revised areas adopted in the Census of 1911, the Indian Empire contains 1,802,657 square miles, or some 36,000 more than in 1901. About 23,000 square miles have been added owing to the enumeration for the first time of the Agency tracts attached to the North-West Frontier Province. A further 6,500 represent the area of the Sunderbans, or swampy littoral of the Ganges delta, which was left out of account at previous enumerations. Finally the Frontier State of Manipur has been found to contain about 5,000 square miles more than the estimate made in 1901.

Population Divisions.—The provinces under British administration comprise 1,093,074 square miles, or 60·6 per cent of the total. The remainder is included in the Native States. The total population is 315,156,396, of which British territory contains 244,267,542, or 77·5 per cent. and the Native States 70,888,854 or 22·5 per cent.

Comparisons with Europe.—These stupendous figures can be grasped only by contrast. The Indian Empire is equal to the whole of Europe, except Russia. Burma is about the same size as Austria-Hungary; Bombay is comparable in point of area with Spain; Madras, the Punjab, Baluchistan, the Central Provinces and Berar and Rajputana are all larger than the British Islands; the United Provinces and Bihar and Orissa than Italy; and Hyderabad and Kashmir than Great Britain excluding Yorkshire.

The population of India exceeds that of Europe without Russia, and is considerably more than three times that of the United States of America. The United Provinces and Bengal, with the States attached to them, both have as many inhabitants as the British Islands, Bihar and Orissa as France, Bombay as Austria, and the Punjab as Spain and Portugal combined. The population of the Central Provinces and Berar approaches that of Brazil; Hyderabad and Burma have as many inhabitants as Egypt; Central India and Rajputana as Scotland and Ireland combined; and Assam as Belgium.

Density.—In the whole Empire there are on the average 175 persons to the square mile or much the same as Europe outside Russia. In British territory the number to the square mile is 223 and in the Native States 100; the former figure exceeds by 34 the density ratio in France and the latter is indentical with that in Spain.

There are great local variations in density. In nearly two-thirds of the districts, and States the number of persons to the square mile is less than 200, and in about a quarter it ranges from 200 to 500. The units with less than 100 persons to the square mile covers two-fifths of the total area, but contains only one-eleventh of the population.

Causes of Density.—The productiveness of the soil is the main factor in determining the density of the Indian people. The most thickly peopled tracts are the level plains where practically every inch of the land is fit for tillage. This is notably the case in Bengal and Bihar and the United Provinces East. The next most densely peopled tracts are the low-lying plains along the sea coast in the southern part of the peninsula. In the United Provinces West and the Punjab East the configuration of the surface is equally favourable; the rainfall is more scanty and less

	1911.	1901.	1891.	1881.	1872.
INDIA	315,156,396	294,361,056	287,314,671	253,896,330	206,162,360
PROVINCES	244,267,542	231,605,940	221,240,836	198,882,817	185,163,435
Ajmer-Merwara	501,395	476,912	542,358	460,722	396,331
Andamans and Nicobars	26,459	24,649	15,609	14,628	....
Assam	6,713,635	5,841,878	5,477,302	4,907,792	4,150,769
Baluchistan	414,412	382,106	....	....	....
Bengal	45,483,077	42,141,477	39,089,632	36,316,728	34,119,465
Bihar and Orissa	34,490,084	33,242,783	32,876,557	30,988,320	26,486,482
Bihar	23,752,969	23,360,212	23,581,538	22,418,367	19,735,627
Orissa	5,131,753	4,982,142	4,666,227	4,343,964	3,603,156
Chota Nagpur	5,605,362	4,900,429	4,628,792	4,225,989	3,147,699
Bombay (Presidency)	19,672,642	18,559,650	18,878,471	16,494,538	16,301,362
Bombay	16,113,042	15,304,766	15,959,292	14,042,621	14,075,508
Sind	3,513,435	3,210,916	2,875,100	2,875,100	2,206,565
Aden	46,165	43,974	44,079	34,860	19,289
Burma	12,115,217	10,490,624	7,722,053	3,736,771	2,747,148
Central Provinces and Berar	13,916,308	11,971,452	13,048,972	11,943,363	9,951,268
Central Provinces	10,859,146	9,217,436	10,151,481	9,270,690	7,723,614
Berar	3,057,162	2,754,016	2,897,491	2,672,673	2,227,654
Coorg	174,976	180,607	173,055	178,302	168,312
Madras	41,405,404	38,229,654	35,644,428	30,841,154	31,230,622
North-West Frontier Province (Districts and Administered Territories).	2,196,933	2,041,534	1,857,519	1,575,943	17,609,672
Punjab	19,974,956	20,330,337	19,009,368	17,274,597	17,609,672
United Provinces of Agra and Oudh	47,182,044	47,692,277	46,905,512	44,149,959	42,002,004
Agra	34,624,040	34,859,109	34,254,588	32,762,127	30,780,961
Oudh	12,558,004	12,833,168	12,650,924	11,387,832	11,221,043

regular; but it is supplemented in many parts by water from the canals. The natural divisions which contain the coast districts of Orissa and north Madras, with a rainfall of 50 inches, has a relatively low mean density, but this is because it includes on the west a considerable hilly area, while on the east near the sea the ground is swampy and impregnated with salt. In the intermediate strip, between the littoral and the hills, the density is as great as in parts of the lower Gangetic Plain. Want of water is the main explanation of the comparatively sparse population in several more or less level tracts such as Gujarat, Rajputana East and Central India West, and the North-West dry area. In Assam there are extensive tracts of hill and jungle and sandy stretches in the strath of the Brahmaputra River, where permanent cultivation is out of question. The agricultural returns show that three-quarters of the whole area is cultivable but this simply means that crops of some kind can occasionally be grown. The proportion of the area fit for permanent cultivation must be less than half that shown in the returns.

TOWNS AND VILLAGES.

The definition of a town in the Indian census statistics includes every municipality; all Civil Line not included within municipal limits; every cantonment; every other continuous collections of houses inhabited by not less than 5,000 persons, which may be treated as a town for census purposes. Only 9·5 per cent. of the population of India are found in towns as defined above, compared with 78·1 per cent. in England and Wales and 45·6 per cent. in Germany. Rather more than half the urban population of India is found in towns containing upwards of 20,000 inhabitants, about one-fifth in towns with from ten to twenty thousand, and the same proportion in those with from five to ten thousand; the remainder, about one-fifteenth, live in towns with less than five thousand. The tendency to urban aggregation is most marked in the west of India and least so in the north-east. The proportion of the urban to the total population in the main provinces ranges from 18 per cent. in Bombay to only 3 per cent. in Assam. The urban population of Upper India is much larger than it otherwise would be, because of the numerous old capitals which are found there. In the future the main factors will be the expansion of trade and industrial development.

Sex in Towns.—In respect of the distribution by sex, the urban population in India presents a striking contrast to that of European countries. In Europe the proportion of females is larger in towns than in the general population, but in India it is considerably smaller, and the number of females per thousand males is only 847, compared with 953 in the population as a whole. The reason is that in this country the great majority of the domestic servants, shop hands and factory employes are males. The disproportion is most marked in large trading and industrial centres where the number of immigrants is large. In Calcutta, for example, the foreign-born population contains only 357 females per thousand males.

Religion in Towns.—Of the Parsis no fewer than six out of every seven are resident in towns; of the Jains, the proportion is nearly one-third; and of the Christians more than one-fifth. There is a marked contrast between these proportions and those for Hindus and Mahomedans who form the bulk of the population. Of the Mahomedans less than one-eighth, and of the Hindus less than one-eleventh, reside in towns. In the case of the former the proportion rises to one-sixth if we exclude the figures for Bengal, where the majority of the Mahomedans are the descendants of local converts. Amongst the Hindus the higher castes have hitherto shown a greater predilection for town-life than the lower, but the disproportion is gradually disappearing; modern industrial developments are attracting the lower castes to towns in ever-increasing numbers.

Urban and Rural.—The proportion of the urban to the total population has fallen during the decade from 9·9 to 9·5 per cent. The main explanation of this is undoubtedly the fact that plague has been far more prevalent in towns than in rural areas. This scourge has now spread to all parts of the Empire except the east and south. At the time of the census an epidemic was raging in many towns, especially in those of the United Provinces, Central India and the Central Provinces and Berar, and a large number of the regular inhabitants had gone away. In addition, however, to driving people away, plague has been responsible in many towns for a terribly heavy mortality. It is impossible to make any estimate of the direct and indirect effects of plague on the growth of towns, but it is quite certain that they have been enormous.

Urban Tendencies.—We cannot draw any conclusions as to the tendency to urban aggregation from a comparison of the statistics of the present census with those of the previous one, when plague was still a new and more or less local visitation, but there can be no doubt that there is a growing tendency for people to congregate in towns of a certain kind. The introduction of machinery is rapidly causing the old cottage industries to be replaced by mills and factories; and these are necessarily located at those places where there are the best facilities for collecting the raw material and distributing the manufactured article. The jute industry is practically confined to the banks of the Hooghly near the port of Calcutta. Cotton mills are found chiefly in Western India and woollen and leather factories at Cawnpore and Delhi. The increasing trade of the country and the improvements in railway communications also encourage the growth of towns. Not only are the great sea ports attracting an ever-growing population, but various inland towns are benefiting from the same cause. The extent to which modern conditions of trade and industry are causing the growth of towns is obscured not only by plague, which is generally far more prevalent in towns than in rural areas, but also by the decay of old centres of population, which owed their importance to past political and economic conditions. Throughout India there are many former capitals of defunct dynasties whose population is steadily dwindling. During the last ten years, Mandalay, the last capital of the kings of Ava, has lost a quarter of its population.

GROWTH OF THE INDIAN POPULATION—*contd.*

——	1911.	1901.	1891.	1881.	1872.
STATES AND AGENCIES	70,888,854	62,755,116	66,073,835	55,013,513	20,998,925
Assam State (Manipur)	346,222	284,465	....	221,070	....
Baluchistan States	420,291	428,640	....	....	....
Baroda State	2,032,798	1,952,692	2,415,396	2,182,158	1,997,598
Bengal States	822,565	740,299	716,310	698,261	567,827
Bihar and Orissa States	3,945,209	3,314,474	3,028,018	2,410,611	1,723,900
Bombay States	7,411,675	6,908,559	8,081,950	6,937,893	6,797,970
Central India Agency	9,356,980	8,497,805	10,136,403	9,261,907	....
Central Provinces States	2,117,002	1,631,140	1,712,562	1,387,294	928,116
Hyderabad State	13,374,676	11,141,142	11,537,040	9,845,594	....
Kashmir State	3,158,126	2,905,578	2,543,952	....	....
Madras States	4,811,841	4,188,086	3,700,622	3,344,849	3,289,392
Mysore State	5,806,193	5,539,399	4,943,604	4,186,188	5,055,402
N.-W. F. Province (Agencies and Tribal areas)	1,622,094	83,962	....	....	....
Punjab States	4,212,794	4,424,398	4,263,280	3,861,683	....
Rajputana Agency	10,530,432	9,853,366	12,171,749	9,934,255	....
Sikkim State	87,920	59,014	30,458	....	....
United Provinces States	832,036	802,097	792,491	741,750	638,720

CITIES.

The general practice of statisticians is to treat as cities only those places which have a population of more than 100,000. According to this standard there are in India only 30 cities, with a population of 7,075,782, or 2.2 per cent. of the population. Here there is an extraordinary difference between the Indian conditions and those of Western countries. In England the cities contain 45 per cent. of the total population, in Germany 21, and in France 14 per cent. But even in these countries the growth of cities is comparatively recent. In 1871 England had only 27 cities with 9.5 million inhabitants and Germany only 8 with 2 millions. There are signs that in India the growth will be more rapid in the future than it has been. The population of cities has risen since 1872 by 64 per cent. and the net increase, comparing like with like, is 43 per cent. The most rapid growth during this period is shown by Rangoon which has trebled its population. Next comes Karachi with an increase of 168 per cent. and then Madura and Howrah with 158 and 113 per cent. respectively. Since 1901, two new places, Jubbulpore and Dacca, have entered the list of cities, while Baroda has disappeared from it. Eighteen cities have gained, and twelve have lost, population. Of the latter, a few like Mandalay are really decadent, but in most, such as Nagpur and Cawnpore, the loss was due wholly to the temporary influence of plague. The progressive cities are differentiated from those which are decadent by their large immigrant population. In Bombay, Calcutta and Howrah this exceeds 70 per cent. of the total and in Rangoon and Karachi it is close on 60 per cent. In Patna, Mandalay and Bareilly, on the other hand, it is barely 10 per cent.

Calcutta.—In speaking of Calcutta we may mean Calcutta proper, or the area administered by the Calcutta Municipal Corporation with the port, fort and canals, the population of which is 896,067, or this area plus the suburban municipalities of Cossipur-Chitpore, Manicktola and Garden Reach with 1,04,3307 inhabitants, or lastly Greater Calcutta, which also includes Howrah, with an aggregate population of 1,222,313. The suburban municipalities differ from Calcutta only in respect of their Municipal Government. From a structural point of view they cannot be distinguished. The buildings are continuous throughout, and there is nothing to show where one municipality begins and the other ends. A striking feature of the statistics is the large number of immigrants. Less than 29 per cent. of the inhabitants of Calcutta proper claim it has as their birthplace. The vast majority are immigrants, of whom 204,000 come from Bihar and Orissa and 90,000 from the United Provinces. Of the Bengal districts, the largest contributions are those from the 24 Parganas (88,000), Hooghly (48,000) and Midnapur (29,000). The volume of immigration is equally great in the suburbs and Howrah.

The first regular census of Calcutta proper taken in 1872 showed a population of 633,009. In 1881 there was practically no change, but in 1891 a gain of 11·4 per cent. was recorded. In 1901 here was a further increase of 24·3 per cent., but part of this was due to improved enumeration. At the present census the rate of increase in Calcutta proper has dropped to 5·7 per cent. The falling off is due largely to the growing tendency of the inhabitants to make their home in the suburbs or even further afield. The suburban municipalities have grown during the decade by 45·3 per cent.

Bombay—which has now a population of 979,445 was a petty town with about ten thousand inhabitants when it passed into the possession of the British in 1661. The population was estimated to be 100,000 in 1780, 180,000 in 1814 and 236,000 in 1836. At the first regular census in 1872 it had risen to 644,405, and nineteen years later, in 1891, it was 821, 764. In the next decade plague, which first appeared in September 1896, caused a serious set back; and it is estimated that by 1901 this disease had already been responsible for 114,000 deaths. The census of that year showed a decrease of about 6 per cent., but this was not wholly due to deaths. At the time when the census was taken, a virulent epidemic was in progress, and large numbers of the permanent residents had sought safety in flight. A fresh enumeration taken in 1906 by the Health Department of the Municipality gave a population of 959,537. The number now returned exceeds that of 1901 by 26 per cent. but it is only 2 per cent. more than it was at the time of the local enumeration of 1906. It is said that the census of 1911 was taken at a time when many of the immigrants from neighbouring districts had gone to their permanent homes for the Holi holidays, and that many of the cotton mills had closed down temporarily owing to the prohibitive price of the raw material. Like other large trading and industrial centres, Bombay is peopled mainly by immigrants; and more than 80 per cent. of its inhabitants were born elsewhere. Most of them come from the neighbouring districts: more than one-fourth of the total number are from Ratnagiri, while four other districts together supply more than a third. There are 30,000 Goanese, most of whom are in domestic service. Of the immigrants from outside the province, some 50,000, chiefly mill hands, are from the United Provinces, and 12,000 mainly shopkeepers, from Rajputana. Of the immigrants from outside India the largest number (6,000) come from the United Kingdom.

Madras.—Unlike Calcutta and Bombay, Madras, which is handicapped by its distance from the coal-fields, has but few large industries. The indigenous handicrafts are decaying and their place is not being taken by factories of the modern type. Apart from its being the headquarters of the Local Government, Madras owes whatever importance it possesses to its position as a distributing centre. Of its total population (518,660), only one-third are immigrants, and of these only 12 per cent. have come from places beyond the limits of the Madras Presidency. The great majority are natives of the four districts in the immediate vicinity of the city.

The population grew fairly rapidly during the twenty years prior to 1901, but since then it has been almost stationary. There has been an increase of about one per cent. in the number of persons born in the city, but fewer of them

SUMMARISED GROWTH OF THE INDIAN POPULATION.

——	1901 to 1911.	1891 to 1901.	1881 to 1891.	1872 to 1881.	Net variation in period 1872 to 1911. Increase (+). Decrease (—).
INDIA	+20,795,340	+7,046,385	+33,418,341	+47,733,970	+108,994,036
PROVINCES	+12,661,602	+10,365,104	+22,358,019	+13,719,382	+59,104,107
Ajmer-Merwara	+24,483	—65,446	+81,636	+64,391	+105,064
Andamans and Nicobars	+1,810	+9,040	+ 981	....	....
Assam	+871,757	+364,576	+569,510	+757,023	+2,562,866
Baluchistan	+32,306	....	....	....	....
Bengal	+3,341,600	+3,051,845	+2,772,904	+2,197,263	+11,363,612
Bihar and Orissa	+1,247,301	+366,226	+1,888,237	+4,501,838	+8,003,602
Bihar	+392,757	—221,326	+1,163,171	+2,682,740	+4,017,342
Orissa	+149,611	+315,915	+322,263	+740,808	+1,528,597
Chota Nagpur	+704,933	+271,637	+402,803	+1,078,290	+2,457,663
Bombay (Presidency)	+1,112,992	—318,821	+2,383,933	+193,176	+3,371,280
Bombay	+808,276	—654,526	+1,916,671	—32,887	+2,037,534
Sind	+302,525	+335,810	+458,043	+210,492	+1,306,870
Aden	+2,191	—105	+9,219	+15,571	+26,876
Burma	+1,624,593	+2,768,571	+3,985,282	+989,623	9,368,069
Central Provinces and Berar	+1,944,856	—1,077,520	+1,105,609	+1,992,095	+3,965,040
Central Provinces	+1,641,710	—934,045	+880,791	+1,547,076	+3,135,532
Berar	+303,146	—143,475	+224,818	+445,019	+829,508
Coorg	—5,631	+7,552	—5,247	+9,999	+6,664
Madras	+3,175,750	+2,585,226	+4,803,274	—389,468	+10,174,782
North-West Frontier Province (Districts and Administered Territories).	+155,399	+184,015	+281,576	+1,240,868	+4,562,217
Punjab	—355,381	+1,320,969	+1,734,771		
United Provinces of Agra and Oudh	—510,233	+786,765	+2,755,553	+2,147,955	+5,180,040
Agra	—235,069	+604,521	+1,492,461	+1,981,166	+3,843,079
Oudh	—275,164	+182,244	+1,263,092	+166,789	+1,336,961

have been enumerated within the city limits. As compared with 1901 the net gain due to migration is less than 9,000. It is possible that the great demand for labour in Burma, where wages are very high, has attracted many of the labouring classes who would otherwise have sought their living in Madras.

Hyderabad.—Next to the three Presidency towns, the largest city in India is Hyderabad, the capital of the Nizam's Dominions. Its population is shown in the local Census Report as 500,623. Hyderabad has hitherto made very little industrial progress, and less than a quarter of its population is drawn from outside.

HOUSES AND FAMILIES.

Generally speaking it may be said that the labouring classes in India live in one, or at the most two, single room huts. The home of a well-to-do peasant consists of a public sitting room and a cook room and several apartments which are arranged round and open on to a courtyard. In spite of the joint family system the number of houses corresponds very closely to the number of families in the European sense. The total number of houses is 63·7 million, and there are 64·6 million married females aged 15 and over. Except amongst the higher castes who form but a small fraction of the total population the joint family system is not nearly so common as is frequently supposed. Where it is in vogue, there is often a strong disruptive tendency. In the towns and cities, owing to the high rents, the unit for all below the middle class is the room, not the house.

	Average population per house
1881	5·8
1891	5·4
1901	5·2
1911	4·9

MOVEMENT OF THE POPULATION.

According to the census returns, the total population of India has increased by 7·1 per cent. during the last decade, and by 52·9 per cent. since 1872, but the real gain since the latter date is very much less than this. Large tracts of country, including the Central India and Rajputana Agencies, Hyderabad and the Punjab States, which were omitted from the census returns of 1872, were included in those of 1881. In 1891 the greater part of Upper Burma and Kashmir and several smaller units were enumerated for the first time. In 1901 the most important additions were a portion of Upper Burma and the greater part of Baluchistan. In 1911 the Agencies and tribal areas in the North-West Frontier Province, together with a few smaller areas, were included within the scope of the enumeration. The real increase in the population in the last 39 years is estimated at about 50 millions, or 19 per cent. This is less than half the increase which has taken place in the same period amongst the Teutonic nations of Europe, but it considerably exceeds that of the Latin nations. In France the population has grown by less than 7 per cent. since 1870, but this is because of its exceptionally low birth-rate In India the birth-rate is far higher than in any European country; and it is the heavy mortality especially amongst infants, which checks the rate of increase.

Famine and Disease.—In addition to the causes which ordinarily govern the movement of the population, India is subject to two special factors—famine and epidemic disease. The decade preceding the census of 1911 was free from widespread famines such as those of the preceding ten years. In 1907 there was a partial failure of the monsoon which was felt over a wide area, extending from Bihar to the Punjab and Bombay, and causing actual famine in the United Provinces and in a few districts elsewhere. Prices ruled high in most years and there was an extension of special crops, such as jute and cotton, which are more profitable to the cultivator than food grains. It was on the whole a period of moderate agricultural prosperity. From the point of view of public health, the censal period would have been an average one, but for the ravages of plague. Breaking out in Bombay in 1896, it has by March 1901 causeda recorded mortality of half a million. Since then it has continued its ravages, especially in Bombay and Upper India. The mortality from it rose from about a quarter of a million in 1901 to 1·3 millions in 1907. It fell below a quarter of a million in each of the next two years, but in 1910 it exceeded half a million. The total number of deaths from plague during the decade was nearly 6·5 millions of which over one-third occurred in the Punjab and two-fifths in the United Provinces and Bombay, taken together. The disease fortunately has failed to establish itself in Bengal, Assam, and on the East Coast and in the extreme south of the Peninsula. This however is only the recorded mortality; in time of epidemic the reporting agency breaks down and large numbers of deaths escape registration. Plague attacks women more than men, and people in the prime of life more than the young and old. If plague is omitted, and it is assumed that the mortality of the decade would otherwise have remained normal, the population of the census of 1911 would have been greater than it was by at least 6·5 millions. In other words, the population would have increased by 9·3 instead of 7·1 per cent.

General Conclusions.—The most noticeable feature is the continuous rapid growth in Burma. Lower Burma has grown by 135 per cent. since 1872 and the whole Province including Upper Burma, which was annexed in 1886, by 37 per cent. since 1891. In Assam including Manipur the increase since 1872 amounts to 70 and in the Central Provinces and Berar to 47 per cent. In the other main provinces the rate of growth has been much slower. In some provinces, such as Burma, Assam and Bengal there has been continuous progress but others, at some time or another, have sustained a set-back In the larger provinces at least, the internal variations are also frequently considerable. In Bengal one district has at the present time a smaller population than it had in 1872, while four others have more than doubled their population since that date.

In British territory there has been a gain of 9·1 per cent. over about nine-tenths of the area,

SUMMARISED GROWTH OF THE INDIAN POPULATION—*contd.*

——	1901 to 1911.	1891 to 1901.	1881 to 1891.	1872 to 1881.	Net variation in period 1872 to 1911. increase (+). Decrease (—).
STATES AND AGENCIES	+8,133,738	—3,318,719	+11,060,322	+34,014,588	+49,889,929
Assam State (Manipur)	+61,757	....	....	....	....
Baluchistan States	—8,349	....	....	....	....
Baroda State	+80,106	—462,704	+233,238	+184,560	+35,200
Bengal States	+82,266	+23,989	+18,049	+130,434	+254,738
Bihar and Orissa States	+630,735	+286,456	+617,407	+686,711	+2,221,309
Bombay States	+503,116	—1,173,391	+1,144,057	+139,923	+613,705
Central India Agency	+859,175	—1,638,598	+874,496	....	....
Central Provinces States	+485,862	—81,422	+325,268	+459,178	+1,188,886
Hyderabad State	+2,233,534	—395,898	+1,691,446	....	....
Kashmir State	+252,548	+361,626	....	....	....
Madras States	+623,755	+487,464	+355,773	+55,457	+1,522,449
Mysore State	+266,794	+595,795	+757,416	—869,214	+750,791
N.-W. F. Province (Agencies and Tribal areas) ..	+1,538,132	....	....	....	....
Punjab States	—211,604	+161,118	+401,597	....	....
Rajputana Agency	+677,066	—2,318,383	+2,227,494	....	....
Sikkim State	+28,906	+28,556	....	....	....
United Provinces States	+29,939	+9,606	+50,741	+103,030	+193,316

with three quarters of the total population, and a loss of 5·3 per cent. in the remaining one-tenth of the area and one-fourth of the population. The contrast in different parts of the Native States is still more striking. The net increase of 10·3 per cent. is the outcome of a gain of 14·3 per cent. in four-fifths of the total area and population, coupled with a loss of 6·2 per cent. elsewhere. The relatively greater net increase in the Native States as compared with British territory is explained by the fact that many of the States suffered severely from famine in the previous decade when they sustained a net loss of 5 per cent., while British territory gained 4·7 per cent. Apart from this, in ordinary circumstances a comparatively high rate of increase is to be expected in the Native States, as they are, on the whole, more undeveloped than British territory, and contain a much larger proportion of cultivable waste land. The net increase in India as a whole during the last decade is the resultant of a gain of 10·3 per cent. in an area of 1,517,000 square miles, with a population of 245 millions and a present density of 162 to the square mile, and a loss of 5·5 per cent. in an area of 218,000 square miles with a population of 68 millions and a density of 312 to the square mile.

MIGRATION.

In India there are two currents of migration—minor and major. The chief of the minor movements is the custom, almost universal amongst Hindus, whereby parents seek wives for their sons in a different village from their own. Of the 26·5 million natives of India who were enumerated in a district other than that in which they were born, 16·5 millions, or 62 per cent. were born in a district adjoining that in which they were enumerated. The major currents of migration are governed by economic conditions. The most noticeable movements are the large streams of emigration from Bihar and Orissa, Madras, the United Provinces and Rajputana, and of immigration into Bengal, Assam and Burma. Owing to its fertile soil, Bengal is able to support practically the whole of its dense indigenous population by agriculture. It is necessary therefore to man the jute mills by imported labour, as also the tea gardens of Darjiling and Jalpaiguri and to draw the general labour supply from outside. In Bengal the net excess of immigrants over emigrants is close on 1,400,000. Of these about 236,000 are Natives of a district in Bihar and Orissa, or Assam, contiguous to the Bengal district in which they were enumerated. Assam and Burma are sparsely populated and the land available for cultivation being ample, very few of the indigenous inhabitants find it necessary to work for hire. The tea gardens of Assam and the rice mills and oil wells of Burma have to obtain their coolies elsewhere. In Assam 12·5 per cent. and in Burma 5 per cent. of the population are immigrants. On an average 51,000 labourers and dependants go each year to the tea gardens of Assam. In Burma, Madras supplies labourers for the rice-milling, oil and other industries, whilst many coolies flock into the province from Chittagong, chiefly for the rice harvest. The net loss to Bihar and Orissa on account of migration is about 1·5 millions. The United Provinces sustain a net loss of about 800 000 from migration, chiefly in the direction of Bengal. Madras being very backward from an industrial point of view, there is no great local demand for labour. At the same time there is an exceptionally large population of the "untouchable" castes, who have no scruples about seeking their livelihood oversea. It provides Ceylon with labour for its plantations, Burma with labour for its industries, and the Federated Malay States with labour for their rubber plantations. The enterprising Marwari traders of Rajputana have penetrated to all parts of India and are to be found in very important bazars throughout Bengal and even in Assam. Bombay is industrially more advanced than Bengal, but as its soil is less productive there is a large local supply of labourers, chiefly from the southern coast strip called the Konkan. The United Provinces give more than four times as many labourers to Bengal as to Bombay. As for the migration between British India and Native territory, it involves a loss of 135,000 to the Native States.

Asiatic Immigration.—Of the 504,000 persons born in other Asiatic countries who were resident in India at the time of the census, more than half were natives of Nepal. Of the 92,000 immigrants from Afghanistan all but 11,000 were enumerated in Northern India. The rest were cold weather visitors who travel about the country peddling piece-goods and other articles of clothing. These Cabuli pedlars cause great trouble in Bengal by their truculence. The number of Chinese is 80,000. Most of these are found in Burma, but the Chinaman is making his way into Bengal, where he is appreciated as a shoemaker and carpenter. From Arabia come 23,000 immigrants, chiefly to Bombay.

Non-Asiatic Immigration.—The total number of immigrants from countries outside Asia is 146,265. Of these 131,968 come from Europe. The United Kingdom sends 122,919; Germany comes next with only 1,860 and then France with 1,478. As compared with 1901 there is an increase of about 26,000 in the number of immigrants from the United Kingdom. Of the British-born 77,626 were serving in the army as compared with 60,965 at the time of the previous census, when a strong contingent had been sent from India to reinforce the British garrison in South Africa. The rest of the increase is accounted for by the industrial development which has taken place, the extension of railways, and the growing extent to which Englishmen in India marry. The number of females born in the British Islands and enumerated in India has risen during the decade from 14,663 to 19,494. The figures for other European countries do not call for any special comment.

Emigration from India.—The Indian census statistics naturally tell us nothing of the emigration from India to other countries. This emigration is of two kinds, the movement across the border which separates India from contiguous countries, such as China, Nepal, Afghanistan and Persia, much of which is of the casual type, and emigration to distant countries. No statistics are available regarding the emigration from India to the countries on its borders. There is probably very little movement from Burma into China

——	1911.	1901.	1891.	1881.	1872.
CALCUTTA AND FORT *	896,067	847,796	682,305	612,307	633,009
BOMBAY	979,445	776,006	821,764	773,196	644,405
MADRAS AND CANTONMENT	518,660	509,346	452,518	405,848	397,552
Agra and Cantonment	185,449	188,022	168,662	160,203	149,008
Ahmedabad and Cantonment	216,777	185,889	148,412	127,621	119,672
Allahabad and Cantonment	171,697	172,032	175,246	160,118	143,698
Amritsar and Cantonment	152,756	162,429	136,766	151,896	135,813
Bangalore Civil and Military Station †	100,834	89,599	100,081	93,540	81,810
Bareilly and Cantonment	129,462	133,167	122,837	115,138	104,533
Benares and Cantonment	203,804	213,079	223,375	218,573	178,300
Cawnpore and Cantonment	178,557	202,797	194,048	155,369	125,877
Dacca	108,551	89,733	81,585	78,369	68,595
Delhi and Cantonment	232,837	208,575	192,579	173,393	154,417
Howrah	179,006	157,594	116,606	90,813	84,069
Hyderabad and Cantonment	500,623	448,466	415,039	367,417	.....
Jaipur	137,098	160,167	158,787	142,578	.....
Jubbulpore and Cantonment	100,651	90,533	84,682	76,023	55,469
Karachi and Cantonment	151,903	116,663	105,199	73,560	56,753
Lahore and Cantonment	228,687	202,964	176,854	157,287	125,413
Lucknow and Cantonment	259,798	264,049	273,028	261,303	284,779
Madura	134,130	105,984	87,428	73,807	51,987
Mandalay and Cantonment	138,299	183,816	188,815	.....	.....
Meerut and Cantonment	116,227	118,129	119,390	99,565	81,386
Nagpur	101,415	127,734	117,014	98,299	84,441
Patna	136,153	134,785	165,192	170,654	158,900
Poona and Cantonment	158,856	153,320	161,390	129,751	118,886
Rangoon and Cantonment	293,316	245,430	182,080	134,176	98,745
Srinagar and Cantonment	126,344	122,618	118,960	.....	.....
Surat and Cantonment	114,868	119,306	109,229	109,844	107,855
Trichinopoly and Cantonment	123,512	104,721	190,609	84,449	76,530

* The above figures for Calcutta exclude the population of Cossipore-Chitpur, Manicktola and Garden Reach. These places have a separate Municipal administration, but for all practical purposes they form an integral part of Calcutta. So also does Howrah except that it lies on the opposite bank of the Hoogly. If the first-mentioned Municipalities be added, the population of Calcutta rises to 1,043,307. If Howran also be included, it comes to 1,222,313.

† Bangalore City and Bangalore Civil and Military Station are structurally a single unit, but for the purpose of the census they have been treated as separate places.

but, on the other hand, it is believed that the emigration into the somewhat sparsely peopled Nepal terai from some of the adjacent British districts, where the population is much congested, exceeds the countervailing immigration. Very few people go from British territory to settle permanently in Afghanistan or Persia, but at the time when the last census was taken owing to drought in Baluchistan, a considerable number of Nomad Brahuis from Chagai, and of Baloch from Mekran had passed over temporarily into Afghanistan and Persia. At a rough guess the number of emigrants across the Indian Frontier may be taken to be about a fifth of a million.

Emigration to Distant Countries.—Of the emigrants to distant countries a certain number find their way to French or Dutch Colonies, such as Surinam, Martinique and Guadeloupe. But the majority go to other parts of the British Empire. The total number of emigrants from India to other parts of the British Empire slightly exceeds a million, of whom about two-thirds are males; more than four-fifths of the aggregate are Hindus and only one-tenth are Mahomedans. Of the total number, about 474,000 were enumerated in Ceylon, 231,000 in the Straits Settlements and the Malay States, 88,000 in British Guiana, 73,000 in Natal, 51,000 in Trinidad, 35,000 in Mauritius, 29,000 in Fiji and 8,000 each in Jamaica and Zanzibar. About one-fifth of these emigrants failed to specify their province of birth; of the remainder no less than 693,000 or 85 per cent. were from Madras, 32,000 from Bengal, about 20,000 each from the United Provinces and Bombay, 16,000 from Bihar and Orissa, 13,000 from the Punjab and 8,000 from the Mysore State. The number who emigrated from other parts of India was inconsiderable. Most of these emigrants to the colonies went as ordinary labourers in sugar, tea, coffee, rubber and other plantations, but a large number of those from Bombay and Bengal are lascars on ships, while many of the natives of the Punjab are employed in the army or military police.

Ceylon.—The movement to Ceylon is of long-standing. Owing to the rapid expansion of tea cultivation, the number of natives of India enumerated in that Island increased by 65 per cent. in the decade ending in 1901. Since then there has been a further increase of nearly 10 per cent. chiefly on account of the new rubber plantations. The great majority of these emigrants are from the southern districts of Madras. Mysore sends about 8,000, Travancore 7,000 and Cochin and Bombay 3,000 each. Most of them are temporary emigrants, who return after a time to their homes in Southern India. The total number of Tamils enumerated in Ceylon exceeds a million, but about half of them have been domiciled in the Island for many centuries and barely 100,000 are the offspring of recent settlers.

Malaya.—The emigration to the Straits Settlements and the Malay States is of quite recent growth, and is due almost entirely to the demand for labour on the rubber plantations. Most of the emigrants are temporary settlers, who return to their homes when they have saved a little money; and the total number of Indians enumerated there exceeds by only 12 per cent. the number who returned to India as their birthplace. Almost four-fifths of the total number are males. Here also Madras is the principal source of supply, the Punjab (8,754) being the only other province which sends an appreciable number.

South Africa.—In Natal, there has been a great deal of permanent settlement; and of the total number of Indians enumerated there, nearly half were born in the colony. Many of these have forgotten their native language and now talk only English. But it is in Mauritius that the process of colonisation has made most headway. The introduction of Indian coolies to work the sugar plantations dates from the emancipation of the slaves, three quarters of a century ago: and from that time onwards many of the coolies who have gone there have made the island their permanent home. Though it now contains only 35,000 persons who were born in India, the total number of Indians is 258,000, or abo ut 70 per cent. of the whole population. A large part of the island is now owned by Indians, and they are dominant in commercial, agricultural and domestic callings.

RELIGIONS.

India is a land of many religions. All the great religious faiths of mankind are represented in its population by communities, whose origin carries us back to the early history of their respective creeds. Hinduism and its offshoots, Buddhism and Jainism, are autochthonous. The Jews of Cochin have traditions which carry back their arrival on the coast to the time of their escape from servitude under Cyrus in the sixth century B. C. The Syrian Christians of Malabar ascribe the introduction of Christianity and the establishment of their original Church to the Apostle St. Thomas, in the year 52 A.D. Nearly two centuries before the followers of Mahomed obtained a footing in India as conquerors, a peaceful trading colony of Arabs had settled on the Malabar coast. The Parsi settlement in Gujarat dates from about the same period. These facts are recalled here because not only Europeans, but even educated Indians, sp ca|as if the first foreign settlement in India was that which followed the Mahomedan conquest, and that Christianity was first brought to the country by the Portuguese. They also dispose of another erroneous idea that up to the time of the Mahomedan conquest, Hinduism absorbed all the foreign elements which found their way into the country. No doubt Greeks, Bactrians and Scythians were so absorbed into the structure of Hinduism, but the fact that the Jews, the Syrian Christians and the Parsis have remained distinct from Hinduism, shows that this was not the case universally. If we may hazard a conjecture, it would seem that the ancient Hindu policy towards immigrants who came by land differed from that observed in the case of immigrants by sea. The Indo-Aryan himself entered the country through the mountain passes in the North-West, and knew something of the land which lay beyond. But the sea was always something of a mystery and a terror to him, and those

STATISTICS OF RELIGIONS.

Religion	India.	British Provinces.	Native States.
INDIA	315,156,396	244,267,542	70,888,854
ndu	217,586,892	163,621,431	53,965,461
Brahmanic	217,337,943	163,381,380	53,956,563
Arya	243,445	234,841	8,604
Brahmo	5,504	5,210	294
kh	3,014,466	2,171,908	842,558
in	1,248,182	458,578	789,604
ddhist	10,721,453	10,644,409	77,044
roastrian (Parsi)	100,096	86,155	13,941
salman	66,647,299	57 423,889	9,223,410
ristian	3,876,203	2,492.284	1,383.919
w	20,980	18,524	2,456
imistic	10,295,168	7,348,024	2,947,144
nor Religions and Religion not returned	37,101	2,340	34,761
t enumerated by Religion	1,608,556	....	1,608,556

POPULATION ACCORDING TO RELIGION AND EDUCATION (CENSUS OF 1911).

Religions	Males.			
	Total Population.	Illiterate.	Literate.	Literate in English.
ndu	110,865,731	99,642,597	11,223,134	1,013,596
h	1,734,773	1,550,610	184.163	11,490
n	643,553	324,968	318,585	13,030
ddhist	5,286 142	3,151,761	2,134,381	21,767
si	51,123	11,128	39,995	25.334
hammadan	34,709,365	32,319,599	2,389,766	176,051
ristian	2,010,724	1,422,154	588,570	252,591
imistic	5,088,241	5,024,408	53.833	1,521
nor and Unspecified	28,818	22,430	6,388	2,981
Total Males	160,418,470	143,479,655	16,938,815	1,518,361
	Females.			
ndu	106,720,714	105,905,904	814,810	23,659
h	1,279,667	1,262,387	17,280	238
n	604,629	580,509	24,120	209
ddhist	5,435,086	5,117,748	317,338	1,383
si	48,973	17,755	31,218	8,347
hammadan	31,883,812	31,746,005	137,807	3,940
istian	1,865,472	1,613,177	252,295	112,643
mistic	5,129,303	5,126,316	2,987	74
or and Unspecified	29,263	26,355	2,908	1,533
Total Females	152,996,919	151,396,156	1,600,763	152,026
Total Population	313,415,389	294,875,811	18,539,578	1,670,387

who came from beyond the sea were looked upon as beings of a different clay. They were treated hospitably, and in course of time they assimilated much of the influences of their Hindu environment. But they remained all the same separate communities, and no attempt was made to incorporate them in the great mass of Hinduism. The prohibition of sea voyage to members of the higher castes is another proof of the peculiar prejudice which ancient Indians cherished against inhabitants of countries divided from India by intervening seas.

Origin of Hinduism.—We have spoken alone of Hinduism as being autochthonous. The opinion generally held is that the ancestors of the Vedic Indians were immigrants from Central Asia. An Indian scholar of some repute has recently endeavoured to show that the received opinion is not borne out by the evidence available in the ancient literatures of India. Whatever may be the value attaching to his contention that the Vedic Indians were not immigrants or descendants of immigrants, but only a section of the indigenous population addicted to the cult of fire-worship, it is true, as he says, that there is no expression in the Vedas of a longing, lingering remembrance of a foreign homeland, such as one might expect to find in the literature of an immigrant race. This is all the more remarkable as an intense attachment to the land they lived in is manifest in all their compositions. A Sanskrit couplet in which the names of the seven great rivers of India, the Ganges, the Jumna, the Godavari, the Saraswati, the Nerbudda, the Indus and the Cauvery are strung together in pious praise, is recited daily by millions of Hindus at their daily devotions, and helps to keep them in mind of the sanctity of the Indian Continent in Hindu eyes. If the ancient Hindus were immigrants, they not only took exceptional care to blot out all memories of the land from which they came from their own minds, but they also strove by every means in their power to bind the reverence and love of their posterity to India as the land *par excellence* of religion and morality, so much so that the name Hindu, in the orthodox acceptance of the term, is not applicable to anyone who is not born in India. If the ancestors of the Hindus were foreigners in India, they must have set themselves, as a matter of deliberate policy, to intertwine the deepest affections and the highest aspirations of their race with the land in which they had settled, to the entire exclusion of the land whence they had come.

Evolution of Hinduism.—Following from the theory that the ancestors of the Hindus were immigrants from Central Asia, is the explanation generally given of the varieties of religious beliefs and social practices to be found within the pale of Hinduism. Hinduism, it is the common idea, was originally a pure and simple creed which has had to compromise with the Animism of the population, amongst whom it spread, by accepting several of its godlings and superstitions. The greatest obstacle in the way of this explanation is that there is no evidence whatsoever of any organised missionary activity among the Hindus at any time. The immense distances and the absence of means of communication, would of themselves have made such activity difficult. Moreover, a compromise implies selection and rejection and the existence of some agency entrusted with the duty of selection. As a fact, however, we find that Hinduism has exercised very little selection, and that it covers practically all the beliefs and customs which prevail amongst the tribes who are included within its pale. Such a state of things is more consonant with the view that the purer forms of Hinduism are highly evolved stages of the cruder forms which are still observed by the less educated and prosperous sections of the community. This view, namely that the higher forms of Hinduism are evolved from lower ones, rather than that the latter are corruptions of the former, gains support from what is now generally accepted as being the true explanation of the origin of certain social customs. Twenty years ago, it was generally held that the custom of child marriages, for instance, was of sacerdotal origin and was most largely prevalent amongst the higher castes from whom it spread to the lower. Recently, however, it has been proved that child marriages are prevalent far more largely and in a far grosser form amongst the lower castes than amongst the higher castes, and that amongst the latter, it is a survival from the times when the caste system was less rigid and intermarriages, that is to say, the taking of wives by the higher castes from the lower were common. It may be added that the two most characteristic beliefs of Hinduism, namely, that in the transmigration of souls and in the law of *Karma* or retribution, are held with, if anything, more tenacity by the lower than by the higher castes.

Scope of Hinduism.—From this point of view, the varying beliefs and customs which under the name of Hinduism not only create no difficulties, but furnish the right clue to the understanding of this unique socio-religious system. They explain why the term "religion" as applied to Hinduism does not adequately express its scope and method. Hinduism has no settled creeds which are obligatory on every Hindu. It enforces no fixed and uniform moral standards on the innumerable sects and castes which bear its name. It extends its suffrages to monogamous, polygamous and even polyandrous unions between the same and, in the case of the so-called *devadasis*, countenances a life of open irregularity. An Indian newspaper recently instituted an interesting discussion on the question "Who is a Hindu." An eminent Hindu lawyer, who subsequently rose to be a judge of one of the Indian High Courts, laid down that a Hindu was one to whom the Indian Courts would apply the Hindu law. The learned lawyer, however, forgot that there are Mahomedan castes which follow the Hindu law in regard to the inheritance of and succession to property.

And yet, though Hinduism refuses to conform to almost every one of the ideas which we usually associate with the term "religion," it is impossible to deny that it occupies a unique and highly important place amongst the religious systems of the world. The reason why it does not fit into our definition of religion is that it represents a fundamentally different line of evolution in the history of religion

OCCUPATIONS OF THE INDIAN PEOPLES.

INDIA	313,470,014
I.—PRODUCTION OF RAW MATERIALS	227,030,092
I.—*Exploitation of the Surface of the Earth*	226,550,483
Pasture and agriculture	224,695,900
(*a*) Ordinary cultivation	216,787,137
(*b*) Growing of special products and market gardening	2,012,503
(*c*) Forestry	672,093
(*d*) Raising of farm stock	5,176,104
(*e*) Raising of small animals	48,063
Fishing and hunting	1,854,583
II.—*Extraction of Minerals*	529,609
Mines	375,927
Quarries of hard rocks	75,424
Salt, etc.	78,258
II.—PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES	58,191,121
III.—*Industry*	35,323,041
Textiles	8,306,501
Hides, skins and hard materials from the animal kingdom	698,741
Wood	3,799,892
Metals	1,861,445
Ceramics	2,240,210
Chemical products properly so called, and analogous	1,241,587
Food industries	3,711,675
Industries of dress and the toilet	7,750,609
Furniture industries	39,268
Building industries	2,062,493
Construction of means of transport	66,056
Production and transmission of physical forces (heat, light, electricity, motive power, etc.).	14,384
Industries of luxury and those pertaining to literature and to arts and sciences.	2,141,665
Industries concerned with refuse matter	1,388,515
IV.—*Transport*	5,028,900
Transport by water	982,766
Transport by road	2,781,938
Transport by rail	1,062,493
Post Office, telegraph and telephone services	201,781
V.—*Trade*	17,839,102
Banks, establishments of credit, exchange and insurance	1,220,187
Brokerage, commission and export	240,858
Trade in textiles	1,277,469
Trade in skins, leather and furs	296,712
Trade in wood	224,838
Trade in metals	59,766
Trade in pottery	101,981
Trade in chemical products	171,927
Hotels, cafes, restaurants, etc.	719,052
Other trade in food stuffs	2,478,868
Trade in clothing and toilet articles	366,701
Trade in furniture	173,413

thought. In other races the line of evolution was from polytheism to monotheism, but in India it was from polytheism to the higher pantheism. Contrasting the development of the Judaic idea of God with that of the Hindus, Dr. Harold Haffding observes "With the Hindus there was no God who claimed sole sway; they went back to the power which makes all gods what they are, to the inner aspirations and needs which find vent for themselves in prayer and sacrifice. Following an extremely remarkable line of thought that which drives men to worship gods was itself regarded as the true divine power. Brahma meant originally the magical, creative word of prayer, but it afterwards came to denote the principle of existence itself, so that we have a transition from the idea of motion towards to that of its goal, from prayer to the object addressed in prayer." The Indian philosopher saw the whole universe transfused and overspread with Deity. He perceived how evil was being perpetually transformed to good in the cosmic process spreading out before the poet and the philosopher, endless and timeless, to whom the evil and the good seemed but different stages in a great common process of which the secret was known only to the Supreme Being. No European writer has caught the innermost essence of the Hindu philosopher's idea of the Supreme, so faithfully, and expressed it so felicitously as Sir Edwin Arnold in his "Light of Asia."

> Before beginning, and without an end,
> As space eternal and as surety sure,
> Is fixed a Power divine which moves to good,
>
> Only its laws endure.
> It is not marred nor stayed in any use,
> All liketh it; the sweet white milk it brings
> To mothers' breasts, it brings the white drops too,
>
> Wherewith the young snake stings.
> It slayeth and it saveth, nowise moved
> Except unto the working out of doom;
> Its threads are Love and Life; Death and Pain
>
> The shuttles of its loom.
> It maketh and unmaketh, mending all;
> What it hath wrought is better than had been;
>
> Slow grows the splendid pattern that it plans
> Its wistful hands between.

The ethical values of Hinduism are not different from those of other great religions. Like them it attaches little importance to the qualities which make for wordly success, and most importance to self-sacrifice, humility and kindliness to all. Only its methods differ. On the whole, however, the Hindu socio-religious scheme, owing to its tendency to make the individual human being a passive instrument in the hands of a Higher Power instead of an active co-operator with it, has favoured stability at the expense of progress.

Hindu sects.—Hinduism is made up of many sects and cults. It is usual to speak of Hinduism as it was before Buddhism, as a single creed, but this is because the literature that has come down to us is the literature of the sect that came to supersede all others. But even in it, we can, by reading between the lines, discover the existence of rival sects. Even the Vedas themselves are the literature probably of one of several sects which happened to be gifted with a talent for letters. The rapid multiplication of sects, however, was undoubtedly encouraged by the introduction of idol worship in imitation of the practice of decadent Buddhism. Hindu religious philosophers recognised three ways of salvation namely, the way of knowledge, the way of faith and the way of service. Every sect of Hinduism recognises the value of all these three ways, but it differs as to the relative importance to be attached to each. The sect of the great philosopher, Sankaracharya, who maintained that the Supreme Being was the only Reality and that all the phenomenal universe was Maya or illusion, and that salvation came from the realisation of this fact did not discard faith and service altogether but only gave these a subordinate position in his scheme of religion. Ramanuja, Madhva and Vallabhacharya who followed him and in more or less degree, refuted his doctrine of the non-reality of the phenomenal universe laid more stress on faith and service than on knowledge, but they did not discard the path of knowledge altogether. It should be mentioned here that it has been the great misfortune of Hinduism that the path of service has come to mean the path not of altruistic service to mankind but the path of service conceived in a ceremonial sense to priests, religious recluses and mendicants and to idols. It is the great aim of the modern religious reform movements such as the Arya Samaj and the Brahma Samaj to rescue the path of service from this spurious interpretation and to make altruistic social service an integral part of religion. The question of sect, however, does not play a very important part in Hinduism. Except in Southern and to a much smaller extent, in Western India, the great mass of the Hindus are not sectaries. In Southern India, the Vaishnavas and Madhvas will, on no account worship Shiva or visit a temple dedicated to him. The Lingayaths are a Shiva sect found in the Karnatak districts of the Bombay and Madras Presidencies, and in Mysore, and they have an invincible repugnance to the worship of Vishnu. But these are exceptional instances. But so far as the bulk of the Hindus are concerned, they resort to the nearest shrine whether it be dedicated to Shiva or Vishnu. The attitude of Hinduism to other religions is that they are each of them the most suitable path to salvation for the people who are born in them—that they are all several roads which lead to Heaven. For this reason Hinduism has never been a proselytising religion. This has proved a disadvantage to it face to face with such religions as Mahomedanism and Christianity which not only admit converts but are actively engaged in seeking them. The proportion of Hindus to the total population has steadily diminished during the last forty years, partly owing to conversions to other religions particularly from amongst the lower classes. Conversions from among members of the higher and literate classes have practically ceased.

Hinduism.—The Hindus number 217,586,89 or 69·4 per cent. of the total population

OCCUPATIONS OF THE INDIAN PEOPLES—*contd.*

V.—Trade—contd.	
Trade in building materials	84,613
Trade in means of transport	239,396
Trade in fuel	524,962
Trade in articles of luxury and those pertaining to letters and the arts and sciences.	522,130
Trade in refuse matter	3,695
Trade of other sorts	2,192,534
C.—PUBLIC ADMINISTRATIONS AND LIBERAL ARTS	10,912,123
VI.—Public Force	2,398,586
Army	665,278
Navy	4,640
Police	1,728,668
VII.—Public Administration	2,648,005
VIII.—Professions and Liberal Arts	5,325,357
Religion	2,769,489
Law	302,408
Medicine	626,900
Instruction	674,393
Letters and arts and sciences	951,167
IX.—Persons living principally on their Income	540,175
D.—MISCELLANEOUS	17,286,678
X.—Domestic Service	4,599,080
XI.—Insufficiently described Occupations	9,236,210
XII.—Unproductive	3,451,381
Inmates of jails, asylums and hospitals	132,610
Beggars, vagrants and prostitutes	3,318,771

DISTRIBUTION OF THE POPULATION.

	India.	British Provinces.	Native States.
1	2	3	4
rea in square miles	1,802,657	1,093,074	709,583
umber of Towns and Villages	722,495	538,809	183,686
(*a*) Towns	2,153	1,452	701
(*b*) Villages	720,342	537,357	182,985
umber of Occupied Houses	63,710,179	49,140,947	14,569,232
(*a*) In Towns	6,037,456	4,409,121	1,628,335
(*b*) In Villages	57,672,723	44,731,826	12 940,897
Total Population	315,156,396	244,267,542	70,888,854
(*a*) In Towns	29,748,228	22,817,715	6,930,513
(*b*) In Villages	285,408,168	221,449,827	63,958,341
Males	161,338,935	124,873,691	36,465,244
(*a*) In Towns	16,108,304	12,525,830	3,582,474
(*b*) In Villages	145,230,631	112,347,861	32,882,770
Females	153,817,461	119,393,851	34,423,610
(*a*) In Towns	13,639,924	10,291,885	3,348,039
(*b*) In Villages	140,177,537	109,101,966	31,075,571

India. Buddhists and Jains together number 11,969,635. Thus 229,556,527 or about 73 per cent. of the Indian people depend for their spiritual sustenance on Hinduism and its offshoots.

The Buddhist population is mostly Burmese, Buddhism having ceased a thousand years ago to count as a leading religion in the land of its birth. Several reasons are usually given to account for the hostility of Hinduism to Buddhism, such as that Buddha denied the authority of the Vedas and the existence of God and of the human soul. Jainism did all this, and yet Jains to-day occupy a recognised position in the Hindu social system. The real reason for the Hindu hostility to Buddhism was that it influenced and was in its turn influenced by in the later years of its prevalence in India, the alien Mongolian consciousness. Hinduism has always been extremely tolerant of indigenous heresies, but it is jealous of outside influence. Indian Buddhism, too, had become extremely corrupt and superstitious long before Hinduism re-established itself as the religion pre-eminently of the Indian people.

Other Indigenous Religions.—Buddhism and Jainism were originally only sects of Hinduism. Jainism even now is not so sharply divided from the latter religion as Buddhism is. Jains are everywhere a recognised section of Hindu Society, and in some parts of the country there has been an increasing tendency on their part to return themselves at the Census as Hindus. The outstanding feature of Jainism is the extreme sanctity in which all forms of life are held. The Jains are generally bankers and traders. Their number at the last Census was 1,248,182, the apparent decline being due to the tendency noted above for Jains to return themselves as Hindus. Buddhism is professed but by few persons in India. The Buddhist population of the Indian Empire is mainly Burmese. Their number is 10,721,453. The founders of Buddhism and Jainism are believed to have been contemporaries, whose date is assigned somewhere in the 5th Century B.C. Sikhism, which is the next important indigenous religion, had its origin many centuries later. The founder of Sikhism, Guru Nanak, flourished in the latter half of the 15th Century of the Christian era. Nanak's teaching amounted to nothing more than pure Theism. He taught that there is only one true God, he condemned idolatry, proclaimed the futility of pilgrimages and rites and ceremonies, and declared that the path to salvation lies through good deeds combined with devotion to the Supreme Being. He preached the brotherhood of men. Sikhism continued to exist as a pacific cult till about the end of the seventeenth century, when the persecution of Aurangzeb had the effect of converting it into a militant creed. This momentous change was accomplished under the direction of Guru Govind, the tenth and last of the Gurus: "I shall send a sparrow," he once exclaimed and "lo! the imperial falcons will fly before it." On his death-bed, he exhorted his followers to regard the Granth, the sacred book of the Sikhs, as their Guru, to look upon it as the person of the living Guru. After his death Sikhism passed through a period of deepest gloom, but it soon recovered and in 1758 the Sikhs entered Lahore in triumph. The teachings of Guru Nanak have profoundly affected Hindu thought and life in the Punjab, though the number of persons professing the Sikh religion is only 3,014,466 according to the 1911 Census. This represents an increase of over 40 per cent. since 1901. Two other religious movements, offshoots of Hinduism, remain to be mentioned, namely, the Brahmo-Samaj and the Arya-Samaj. Both of them are less than one hundred years old. The founder of the former was Raja Ram Mohan Roy, and of the latter, Swami Dayanand Saraswati. The Brahmo-Samaj does not believe in an infallible scripture, while the Arya-Samaj accepts the Vedas as Divinely revealed. Both the movements are opposed to idolatry and favour social reform. The Brahmo movement, appealing as it does to the cultured intellect, has not been making as much progress as the Arya-Samaj. The number of persons professing each of these creeds is 5,504 and 243,445 respectively. The stronghold of the Arya-Samaj is the Punjab, thatof the Brahmo-Samaj, Benga

Non-Indian Religions.

Mahomedanism.—Of non-Indian religions, that is, of religions which had their origin outside India the religion which has the largest number of followers in this country is Mahomedanism. One hundred years before the Mussulmans obtained a foothold in Sind by right of conquest, they were settled in Cochin as traders and missionaries. The author of Cochin Tribes and Castes refers to a tradition that in the 7th Century, a Mahomedan merchant named Malak Medina, accompanied by some priests, had settled in or near Mangalore. The Kollam era of Malabar dates, according to popular tradition, from the departure of Cheruman Perumal, the last of the Perumal Kings, to Arabia, on his conversion to Islam. The date of the commencement of the era is the 25th August 825 A.D. For about twelve Centuries, Islam has existed in India side by side with Hinduism. During that period it has been greatly influenced by Hindu ideas and institutions. Moreover, the Indian converts to Mahomedanism have to a large extent retained the customs and beliefs of Hinduism. The writer of the article on religions of India in the new edition of the *Imperial Gazetteer* observes of Islam in India: "If it has gained some converts from Hinduism it has borrowed from it many of those practices which distinguish it from the original faith of Arabia. In degrees the fervid enthusiasm of the early raids was softened down; the two religions learned to live side by side; and if the Mahomedan in the later days could never conceal his contempt for the faith of his 'pagan' neighbours, he came to understand that it could not be destroyed by persecution. From the Hindus Islam derived much of its demonology, the belief in witchcraft, and the veneration of departed Pirs or Saints. The village Musulman of the present day employs the Hindu astrologer to fix a lucky day for a marriage, or will pray to the village god to grant a son to his wife. This is the more natural, because conversion to Islam, whenever it does occur, is largely from the lower castes." Mahomedanism h

two main and several minor sects. The major sects are the Shiah and the Sunni. The great majority of Indian Mussulmans are of the latter sect. The Punjab and Sind in the North-West and East Bengal in the North-East are the strongholds of Islam in India. The Mussulman population of India, according to the Census of 1911, is 66,647,299. Of this number no less than 24 millions are in Bengal, about 12 millions in the Punjab, and about 5 millions in the United Provinces. Amongst Native States, Kashmere has the largest Mussulman population, about 2½ millions.

Christianity.—Indian Christianity has an even longer history than Indian Mahomedanism. According to the tradition prevailing among the Syrian Christians in Malabar, the introduction of Christianity and the establishment of the Original Church in Malabar in the year 52 A.D. are ascribed to the Apostle St. Thomas, who landed at Cranganore or Musiris, converted many Brahmins and others, ordained two Presbyters, and also founded seven churches, six in Travancore and Cochin, and the seventh in South Malabar (Cochin Castes and Tribes, Vol. II. Chapter XVI, p. 435). The history of Roman Catholicism in India dates from the beginning of the sixteenth Century. The first Protestant mission was established two centuries later by the Lutherans who started their work in Tranquebar in South India under Danish protection. The Christian population, according to the last Census, numbers 3,876,203. Nearly 2½ millions are inhabitants of the Madras Presidency and the Native States connected with it. Bihar and Bombay have each over 300,000 Christians.

Zoroastrianism.—This religion was brought or brought back to India in 717 A.D. by Parsis who, fleeing from persecution at the hands of the Mussulman conquerors of their native land, arrived at the little port of Sanjan, sixty miles north of Bombay in that year. According to the Indian antiquarian scholar, the late Rajendralal Mitra, the ancestors of the Hindus and Parsis dwelt together in the Punjab, when a religious schism led to the latter retracing their steps to Persia. This theory derives probability from the names of the beneficent and malefic deities referred to in the Hindu and Parsi sacred books: "What is most striking in the relations of the two faiths, is," writes Mr. Crooke in his article on the Religions of India in the *Imperial Gazetteer*: "that in the Avesta the evil spirits are known as Daeva (modern Persian Div), a term which the Indo-Aryans applied, in the form Deva, to the spirits of light. By a similar inversion, Asura, the name of the gods in the Rig Veda, suffered degradation and at a latter date was applied to evil spirits; but in Iran, Ahura was consistently applied in the higher sense to the deity, especially as Ahura Mazda, the wise, to the Supreme God." The Parsis have two sects. The principal difference between them appears to be that the holy days of the one precede those of the other by about a month. The number of Parsis, according to the last Census, is 100,096. The majority of the Parsis live in Bombay.

Jews.—The Beni-Israel at Kolaba, in Bombay and the Jews at Cochin are descendants of ancient Colonies. The Kolaba Colony dates back to the sixth century, and the Cochin colony to the second century A.D. Both Jewish colonies recognize a white and black section, the latter being those who have more completely coalesced with the native population. The Jews numbered 20,980 at the Census of 1911.

Animists.—Since the Census of 1891, an attempt has been made to enumerate the "Animists" separately from the Hindus. 10,295,168 persons are classed as Animists, according to the last Census. The difference between Animism and Anthropomorphism has been stated by Professor Westermark, to be that, while the animist worships inanimate objects as gods, Anthropomorphism consists in the worship of such objects as representatives and reflection of the Deity. As a subtle distinction of this kind is not within the grasp of the average enumerator, the category of Animists in the Census Schedules is largely conjectural. Mr. Crooke in the *Imperial Gazetteer* observes "Such a classification is of no practical value, simply because it ignores the fact that the fundamental religion of the majority of the people—Hindu, Buddhist, or even Mussulman is mainly Animistic. The peasant may nominally worship the greater gods; but where trouble comes in the shape of disease, drought, or famine, it is from the older gods that he seeks relief."

SOCIAL INSTITUTIONS.

Uniformity of Indian Social Life.—Though India is a land of many religions and though each religious community has, as a rule, lived apart from the other communities for centuries, still there is a considerable uniformity in the arrangements and institutions of their social life. The social system of the Hindus is the type to which all other communities domiciled in the country have hitherto tended to conform. To a large extent, this uniformity of social arrangements is clearly due to the fact that, amongst the Mahomedans and Indian Christians, for instance, the converts from Hinduism continued to retain their old ideas in regard to social conduct. To a smaller extent, the motive which influenced them to conform to Hindu social ideal has been the convenience thereby caused in business intercourse with their Hindu neighbours. Thus, we find, there is scarcely any community in India which has not been more or less infected by the caste spirit. The Jews, the Parsis, the Christians, and even the Mahomedans have been influenced by it. Other Hindu social institutions and customs which have exerted a similar influence are the joint family system, the custom of child marriages, and of enforced widowhood, and the feeling that contact with persons engaged in certain occupations is polluting. In view of this general similarity of the social institutions of the several Indian communities, a description of the Hindu social system which is the great prototype of them all, will give a general idea of the social life of the Indian population as a whole. It should, however, be mentioned here that, in recent years, as the result of a growing communal consciousness, efforts have been

made by many of the Indian communities to discard whatever is in disaccord with the original simplicity of their respective faiths. But this movement has as yet touched no more than the highly educated fringe and even among the latter, there are thoughtful men who distrust "revivals" as substitutes for reform.

Caste.—The most conspicuous social institution of India is Caste. Caste is based on birth. The effect of caste is to divide society into a number of vertical sections, and not as in modern countries, into horizontal sections. The economic and cultural differences among the members of each caste are great. The millionaire and the pauper, the scholar and the illiterate of one caste, form a social unit. The rich man of one caste must seek a husband for his daughter among the poor of his caste, if he cannot find one of a corresponding position in life. He can on no account think of marrying her to a young man of another caste, though as regards culture and social position, he may be a most desirable match. Thus, each caste is, within itself, a democracy in which the poor and the lowly have always the upper hand over the rich and the high-placed. In this way, the system of caste has, in the past, served as a substitute for State relief of the poor by means of special laws and institutions. To some extent, this is the case even now, but the economic pressure of these days, and the influence of Western education, are profoundly modifying the conception of caste. The growth of the English-educated class on the one hand, and of the modern industrial and commercial class of Indians, on the other with common aspirations and interests, is a factor calculated to undermine the importance of caste. Although for purely social purposes, it will, no doubt, linger for many years longer, it is bound ultimately to collapse before the intellectual and economic influences which are moulding modern India. The question how caste originated has been discussed by several learned Orientalists, but the latest and most authoritative opinion is that its rise and growth were due to several causes, the principal of them being differences of race and occupation. The four original castes of the Hindus have multiplied to nearly two thousand, owing to the fissiparous tendencies of Hindu social life. Some large castes consist of many thousands of families, while others, notably in Gujarat, comprise scarcely a hundred houses. Among Indian Mahomedans, there are several communities which are virtually castes, though they are not so rigidly closed as Hindu castes. Indian Christian converts, in some parts of the country, insist on maintaining the distinctions of their original castes, and in a recent case, one caste of Indian Christians contested, in a Court of Law, a ruling of their Bishop disallowing the exclusive use of a part of their church to members of that caste. The Parsis are practically a caste in themselves. The observations regarding caste apply more or less to the institution of the joint family of which really the former is an extension. This institution is rapidly breaking-up, though the rigidity of the Hindu law of succession operates wholly in its favour.

The Social Reform Movement.—The social reform movement among the Hindus to which reference is made in the foregoing paragraph, had its origin in efforts made by the Government of India, with the co-operation and support of enlightened Hindus in the early part of the last century to put down the practice of *sati*, that is, burning the widow along with her dead husband. This cruel practice, which prevailed particularly among the high caste Hindus in Bengal, was eventually suppressed by legislation. But the discussions which ensued in connection with *sati* question led to the exposure of the hard lot of Hindu widows as a class. Remarriage was prohibited and as child marriages were common, several young girls were condemned to lead a life of celibacy on the death of their husbands. This led to immorality and infanticide by young widows, who were anxious to hide their shame was not infrequent. Led by the Pandit Ishwar Chandra Vidyasagara, a very learned Sanskrit scholar, a movement began which had for its object the removal of the ban on the remarriage of Hindu widows. The Pandit was able to prove from the Hindu religious books that the remarriage of widows had the sanction of antiquity. But it was necessary in order to establish the validity of the remarriage of Hindu widows beyond doubt, to have a law passed by the Legislative Council of the Governor-General of India. The Pandit and his followers memorialised Government. There was strong opposition from the orthodox masses, but the Government of the day were convinced that justice was on the side of the reformers, and the Hindu Widow Remarriage Act was passed. The controversy on the question of the remarriage of widows led to other consequences. It was felt that the age at which girls were married was absurdly low, and that child marriages were at the root of many social evils. It was also realised that the general illiteracy of Indian women was the greatest obstacle in the way of reforming social customs, and that education of women should be the first plank in the social reform platform. The earliest social reformers in India were the Brahmo Samajists who discarded idolatry and caste. Other reformers since then have endeavoured to propagate ideas of social reform entirely on a secular basis. The Indian National Social Conference is their principal organisation, and it is supported by Provincial and District Conferences and Associations. Social reform ideas have made considerable headway during the last twenty-five years. Widow marriages are of weekly occurrence in some provinces. The restrictions of caste as to inter-dining and sea-voyage have lost much of their force. The age at which girls are married is steadily, if slowly, rising. The education of girls is making rapid progress. An increasing number of them go to high Schools and Colleges every year. But the most significant testimony to the spread of social reform ideas in the country is the remarkable diminution in the volume and weight of the opposition to them. The number of journals devoted to the social reform cause is increasing, and some of the newspapers which had made themselves conspicuous by their virulent opposition to social reform twenty years ago, now recognise its utility and importance.

SEX.

In India as a whole the proportion of females per thousand males rose steadily from 954 in 1881 to 963 in 1901. It has now fallen again to exactly the same figure as in 1881. The important aspect of these figures is the great contrast they show between India and Europe, where the number of females per thousand males varies from 1,093 in Portugal, and 1,068 in England and Wales, to 1,013 in Belgium, and 1,003 in Ireland. In drawing attention to this disparity the Chief Census Officer argued that the relatively high mortality amongst females was sufficient to account for the difference stated. Then in summarising the causes of this relatively higher mortality he said: "In Europe, boys and girls are equally well cared for. Consequently, as boys are constitutionally more delicate than girls, by the time adolescence is reached, a higher death-rate has already obliterated the excess of males and produced a numerical equality between the two sexes. Later on in life, the mortality amongst males remains relatively high, owing to the risks to which they are exposed in their daily avocations; hard work, exposure in all weathers and accidents of various kinds combine to make their mean duration of life less than that of women, who are for the most part engaged in domestic duties or occupations of a lighter nature. Hence the proportion of females steadily rises. In India, the conditions are altogether different. Sons are earnestly longed for, while daughters are not wanted. This feeling exists everywhere, but it varies greatly in intensity. It is strongest amongst communities such as the higher Rajput clans, where large sums have to be paid to obtain a husband of suitable status and the cost of the marriage ceremony is excessive and those like the Pathans who despise women and hold in derision the father of daughters. Sometimes the prejudice against daughters is so strong that abortion is resorted to when the midwife predicts the birth of a girl. Formerly, female infants were frequently killed as soon as they were born, and even now they are very commonly neglected to a greater or less extent. The advantage which nature gives to girls is thus neutralised by the treatment accorded to them by their parents. To make matters worse, they are given in marriage at a very early age, and cohabitation begins long before they are physically fit for it. To the evils of early child-bearing must be added unskilful midwifery; and the combined result is an excessive mortality amongst young mothers. In India almost every woman has to face these dangers. Lastly, amongst the lower classes, who form the bulk of the population, the women often have to work as hard as, and sometimes harder than, the men, and they are thus less favourably situated in respect of their occupations than their sisters in Europe." It is but fair to say that this conclusion has been challenged by many Indian writers, who attribute far greater importance than the Chief Census Officer to the omission of females at the enumeration.

MARRIAGE.

Although recognised in some backward parts, polyandry is now rare in India. With orthodox Hindus marriage is a religious sacrament which cannot be revoked. The Mahomedans allow a man to divorce his wife without any special reason, but he then becomes liable to pay her dower. The permission is seldom acted upon. The Buddhists of Burma regard marriage merely as a civil contract, and either side can annul it. The Hindu law places no restriction on the number of wives a man may have; but most castes object to their members having more than one wife, except for special reasons. A Mahomedan may have four wives, but he also in practice is generally monogamous.

Marriage Statistics.—In the population of ages and religions, about half the males and one-third of the females are unmarried; 46 per cent. of the males and 48 of the females are married, and 5 and 17 per cent. respectively are widowed. A reference to the age statistics shows that the great majority of the unmarried of both sexes are very young children, three-quarters of the bachelors being under 15 years of age, while a somewhat larger proportion of the spinsters are under 10; only one bachelor in 24 is over 30, and only one spinster in 14 is over 15. At the higher ages practically no one is left unmarried, except persons suffering from some infirmity or disfigurement, beggars, prostitutes, concubines, religious devotees and mendicants and a few members of certain hypergamous groups who have been unable to effect alliances of the kind which alone are permitted to them by the rules of their community. It is the persons of the above classes who contribute the 4 per cent. of the males over 40, and the 1 per cent. of the females over 30 who are not, and never have been, married.

Marriage Universal.—This universality of marriage constitutes one of the most striking differences between the social practices of India and those of Western Europe. It has often been explained on the ground that, with the Hindus, marriage is a religious necessity. Every man must marry in order to beget a son who will perform his funeral rites and rescue his soul from hell. In the case of a girl it is incumbent on the parents to give her in marriage before she reaches the age of puberty. Failure to do so is punished with social ostracism in this world and hell fire in the next. But it is not only with the Hindus that marriage is practically universal; it is almost equally so with the Mahomedans, Animists and Buddhists.

Early Marriage.—Another striking feature of the Indian statistics as compared with those of Western Europe is the early age at which marriage takes place. According to M. Sundbarg's table showing the average distribution by age and civil condition of the people of Western Europe according to the censuses taken about the year 1880, of the population below the age of 20, only one male in 2,147 is married and one female in 142. In India on the other hand, 10 per cent. of the male, and 27 per cent. of the female, population below that age are married. The number of males below the age of 5 who are married is small, but of those aged 5 to 10, 4 per cent. are married, and of those aged 10 to

15, 13 per cent. At '15-20' the proportion rises to 32, and '20-30' to 69 per cent. Of the females under 5, one in 72 is married, of those between 5 and 10, one in ten, between 10 and 15, more than two in five, and between 15 and 20, four in five. In the whole of India there are 2¼ million wives under 10, and 9 million under 15 years of age. The Hindu law books inculcate marriage at a very early age, while many of the aboriginal tribes do not give their girls in wedlock until after they have attained puberty.

Widowhood.—It is only when we come to a consideration of the widowed that we find a state of things peculiarly Indian and one that seems to be derived from the prescriptions of the Hindu law-givers. The proportion of widowers (5 per cent of the total male population) does not differ greatly from that in other countries, but that of the widows is extraordinarily large, being no less than 17 per cent. of the total number of females, against only 9 per cent. in Western Europe. When we consider their distribution by age, the difference becomes more still striking, for while in western Europe only 7 per cent. of the widows are less than 40 years old, in India 28 per cent. are below this age, and 1·3 per cent. (the actual number exceeds a third of a million) are under 15, an age at which in Europe no one is even married.

The large number of widows in India is due partly to the early age at which girls are given in marriage, and partly to the disparity which often exists between the ages of husband and wife, but most of all to the prejudice against the re-marriage of widows. Many castes, especially the higher ones, forbid it altogether, and even where it is not absolutely prohibited, it is often unpopular. Although widow marriage is permitted by their religion, and the Prophet himself married a widow, the Mahomedans of India share the prejudice to some extent. How the re-marriage of widows first came to be objected to, it is impossible to say, but it seems highly probable that the interdiction originated amongst the Aryan Hindus, that it was confined at first to the higher castes, and that it has spread from them downwards.

Infant Marriage.—It is difficult to draw from the statistics any definite conclusion as to whether infant marriage is becoming more or less common, but so far as they go, they point to a slight diminution of the practice. The figures for 1901 were abnormal owing to the famines of 1897 and 1900, and it is safer to take the year 1891 as the basis of comparison. There are now 18 Hindu girls per mille who are married at the age of '0-5' as compared with only 16 at that time, but at the age '5-10' the proportion has fallen from 146 to 132 and at '10-15' from 542 to 488. Amongst Mahomedans the proportion at the first mentioned age-period has fallen from 7 to 5, at the second from 83 to 65 and at the third from 474 to 393.

The practice has been denounced by many social reformers, since Mr. Malabari opened the campaign a quarter of a century ago; and the Social Conference which holds its meetings annually in connection with the National Congress has made the abolition of child marriage one of the leading planks in its platform. It is, as we have seen, strongly discouraged by the Brahmos in Bengal and the Aryas in Northern India. The more enlightened members of the higher castes who do not allow widows to re-marry are beginning to realise how wrong it is to expose their daughters to the risk of lifelong widowhood, and a feeling against infant marriage is thus springing up amongst them.

In two Native States action has been taken. In Mysore an Act has been passed forbidding the marriage of girls under eight altogether, and that of girls under fourteen, with men over fifty years of age. The object of the latter provision is to prevent those unequal marriages of elderly widowers with very young girls which are popularly believed to be so disastrous to the health of the latter, and which in any case must result in a large proportion of them leading a long life of enforced widowhood. The Gaekwar of Baroda, the pioneer of so much advanced legislation, has gone further. He passed for his State in 1904, in the face of a good deal of popular opposition, an "Infant Marriage Prevention Act", which forbids absolutely the marriage of all girls below the age of nine and allows that of girls below the age of twelve and of boys below the age of sixteen, only if the parents first obtain the consent of a tribunal consisting of the local Sub-Judge and three assessors of the petitioner's caste. Consent is not supposed to be given except on special grounds, which are specified in the Act.

Widow re-marriage.—The prohibition of widow marriage is a badge of respectability. Castes do not allow it rank higher on that account in social estimation. There is a strong tendency amongst the lower Hindu castes to prohibit, or at least, to discountenance, the marriage of widows. At the other end of the social structure there is a movement in the opposite direction. Many social reformers have inveighed against the condemnation of virgin widows to perpetual widowhood, and have pointed out that the custom is a modern innovation which was unknown in Vedic times. In many provinces recently there have been cases in which such widows have been given in marriage a second time, not only amongst Brahmos and Aryas, who naturally lead the way, but also amongst orthodox Hindus. A number of such marriages have taken place amongst the Bhatias of the Bombay Presidency. It is said that in the United Provinces considerably more than a hundred widows have been re-married in the last ten years. The actual results no doubt are small so far, but the first step has been taken and the most violent of the opposition has perhaps been overcome.

EDUCATION.

The general education policy of the Government of India, and its results, are discussed in a special article on Education (*q. v.*) But we may conveniently here indicate some of the education tendencies revealed in the census returns.

Of the total population of India, only 59 persons per mille are literate in the sense of being able to write a letter to a friend and to read his reply. The number who can decipher the pages of a printed book with more or less difficulty is no doubt much larger. Throughout India there are many Hindus who though unable to write can

drone out at least the more familiar parts of the Mahabharata or Ramayana to their neighbours, who feel that it is meritorious to listen to the recital of the sacred texts, even though they, and possibly the reader also, may not always fully understand the meaning. Similarly there are many Mahomedans especially in Northern India, who can read the Koran, though they cannot write a word. Of this minor form of literacy the census takes no count. The number of persons who are literate in the sense in which the term was used at the present census is divided very unequally between the two sexes; of the total male population, 106 per mille are able to read and write, and of the female only 10. In other words there is only one literate female to every eleven males. If we leave out of account children under 15 years of age, the number of literate males per mille is 149, and that of literate females 13.

Education by Provinces.—Thanks to the free instruction imparted in the monasteries and the absence of the pardah system which hampers the education of females in other parts of India. Burma easily holds the first place in respect of literacy. In the whole population 222 persons per mille are literate and the proportion rises to 314 amongst persons over 15 years of age. In every thousand persons of each sex, 376 males and 61 females are able to read and write. Of the other main British provinces, Bengal and Madras come next with 77 and 75 literate persons per mille respectively. Bombay follows closely on their heels. Then after a long interval, come Assam, Bihar and Orissa and the Punjab. At the bottom of the list are the United Provinces and the Central Provinces and Berar, with 34 and 33 literate persons per mille respectively. Differences similar to those noticed above sometimes have their counterpart within provincial boundaries. Thus in Bihar and Orissa the Orissa natural division has 64 literate persons per mille and the Chota Nagpur plateau only 28. In the Central Provinces and Berar, the proportion ranges from only 6 per mille in the Chota Nagpur States to 54 in the Nerbudda Valley.

Native States.—Education is more widely diffused in British provinces than in the Native States, which, taken as a whole, have only 79 males and 8 females per mille who are literate, as compared with 113 and 11 in British territory. The three Native States of Cochin, Travancore and Baroda, however, take rank above all British provinces except Burma, while in respect of female education Cochin divides with Burma the honours of first place. The Kashmir State where only 21 persons per mille can read and write, is in this respect the most backward part of India.

By Religion.—Of the different religious communities excluding the Brahmos and Aryas whose numbers are insignificant, the Parsis easily bear the palm in respect of education. Of their total number 711 per mille are literate, and the proportion rises to 831, if persons under 15 years of age are left out of account. Of the males nearly four-fifths are literate, and of the females nearly two-thirds. Amongst those over 15 years of age only 8 per cent of the males and 26 per cent. of the females are unable to read and write. The Jains, who are mostly traders, come next, but they have only two literate persons to every five amongst the Parsis. Half the males are able to read and write, but only 4 per cent. of the females. It is noticeable, however, that whereas the proportion of literate males is only slightly greater than it was at the commencement of the decade, that of literate females has doubled. The Buddhists follow closely on the Jains, with one person in four able to read and write. Here also we see the phenomenon of a practically unchanged proportion of literate males (40 per cent) coupled with a large increase in that of literate females, which is now 6 per cent. compared with 4 per cent. in 1901. The Christians (22 per cent. literate) are almost on a part with the Buddhists, but in their case the inequality between the position of the two sexes, is much smaller, the proportion of literate females being nearly half that of males. In order to ascertain how far the high position of Christians is due to the inclusion of Europeans and Anglo-Indians, the figures for Indian Christians have been worked out separately. The result is somewhat surprising; for although the Indian converts to Christianity are recruited mainly from the aboriginal tribes and the lowest Hindu castes, who are almost wholly illiterate, they have, in proportion to their numbers, three times as many literate persons as the Hindus and more than four times as many as the Mahomedans. One Indian Christian in six is able to read and write; for males the proportion is one in four; and for females one in ten. The influence of Christianity on education is strikingly illustrated by the figures for the province of Bihar and Orissa, where the proportion of Indian Christians who are literate is 76 per mille, compared with only 5 per mille amongst their animistic congeners. It has to be remembered, moreover, that many of the Indian Christians had already passed the schoolgoing age at the time of their conversion; the proportion who are able to read and write must be far higher amongst those who were brought up as Christians.

The Sikhs come next in order of merit, with one literate person in every fifteen; for males the ratio is one in ten and for females one in seventy. Here again, while the proportion for males shows only a slight improvement, that for females has doubled during the decade. The Hindus have almost as large a proportion of literate males per mille (101) as the Sikhs, but fewer literate females (8). The Mahomedans with only 69 and 4 per mille respectively, stand at the bottom of the list, except for the Animistic tribes of whom only 11 males and 1 female in a thousand of each sex are able to read and write. The low position of the Mahomedans is due largely to the fact that they are found chiefly in the north-west of India, where all classes are backward in respect of education, and in Eastern Bengal where they consist mainly of local converts from a depressed class. In the United Provinces, Madras and the Central Provinces and Berar they stand above or on an equality with the Hindus and the same is the case in Bombay excluding Sind. In Sind the Mahomedan population is exceptionally illiterate, but in the rest of the Presidency it consists largely of traders, and education is much more widely diffused amongst them than amongst Hindus. The figures for Hindus again are a general average for all castes, high and low. It will be seen further on that some of the higher Hindu castes

are better educated than the Buddhists while others are even less so than the Animists.

Increase of Literacy.—The total number of literate persons has risen during the decade from 15.7 to 18.6 millions or by 18 per cent. The number of literate males has increased by 15 and that of literate females by 61 per cent. The proportion who are literate per thousand males has risen from 98 to 106 and the corresponding proportion for females from 7 to 10. If persons under 15 years of age be excluded, the proportions are 138 and 149 for male and 8 and 13 for females. The great improvement in the proportion of literate females is most encouraging. It is true that too much stress should not be laid on this when the actual number is still so small, but, on the other hand, it must be remembered that the rate of increase was equally great in the previous decade, so that it has now been continuous for twenty years. The total number of females over 15 years of age who can read and write is now a million and a quarter compared with less than half a million twenty years ago.

Progress.—Before leaving these statistics of schools and scholars we may glance briefly at the progress which they show is being made. The total number of scholars in all kinds of educational institutions in 1891 was only 3.7 millions. In 1901 it had risen to 4.4, and in 1911 to 6.3 millions. 17.7 per cent. of the population of school-going age were at school in 1912 as compared with 14.8 per cent. in 1907. Between 1891 and 1911 the number of students in secondary schools and Arts Colleges has doubled and the number in primary schools has increased by 67 per cent., the proportion ranging from 3 per cent. in Bombay to 204 per cent. in the United Provinces. Excluding Madras, where a school final examination has recently taken the place of the Matriculation, or Entrance examination of the University, the number of persons passing that examination has risen from 4,079 in 1891 to 10,512 in 1911. Including Madras the number who passed the Intermediate examination in Arts or Science has risen during the same period from 2,055 to 5,141, and that of those who obtained a degree in Arts, Science, Medicine or Law from 1,437 to 5,373. The general conclusion appears to be that, while the general rate of progress is far greater than would appear from a comparison of the census returns of 1901 and 1911, it is most marked in respect of secondary education.

There was a continuous fall, both in the number and the proportion of persons afflicted from 1881 to 1901; and this has now been followed by a move in the other direction. Though the proportion is smaller the number of the insane and the deaf-mutes is now about the same as it was thirty years ago. The number of lepers and blind however is less by about a sixth than it then was.

Infirmities.

The total number of persons suffering from each infirmity at each of the last four censuses is shown in the following table:—

Infirmity.	Number afflicted.			
	1911	1901	1891	1881
Insane	81,006 **26**	66,205 **23**	74,279 **27**	81,13 **35**
Deaf-mutes	199,891 **64**	153,168 **52**	196,861 **75**	197,21 **8**
Blind	443,653 **142**	354,104 **121**	458,868 **167**	526,74 **22**
Lepers	109,094 **35**	97,340 **33**	126,244 **46**	134,96 **57**
Total	833,644 **267**	670,817 **229**	856,252 **315**	937,06 **40**

NOTE.—The figures in heavier type represent the proportion per 100,000 of the population.

Insanity.—In respect of the prevalence of insanity, India compares very favourably with European countries. According to the latest returns, the proportion of persons thus afflicted in England and Wales is 364 per hundred thousand of the population, or fourteen times the proportion in India. This may be due partly to the fact that the English statistics include the weak-minded as well as those who are actively insane, and to the greater completeness of the return in a country where the majority of the mentally afflicted are confined in asylums; but the main reason no doubt is to be found in the comparatively tranquil life of the native of India. It is well known that insanity increases with the spread of civilisation, owing to the greater wear and tear of nerve tissues involved in the struggle for existence.

The total number of insane persons exceeds by 9 per cent. that returned in 1891, but their proportion per hundred thousand of the population has fallen from 27 to 26. The decline is fairly general, the chief exceptions being the United Provinces, the North-West Frontier Province, the four Native States in the peninsular area. In the United Provinces the number of the insane per hundred thousand of the population has risen from 12 to 18. No satisfactory explanation of this large increase is forthcoming.

Deaf-Mutes.—By deaf-mutism is meant the congenital want of the sense of hearing whether the absence of special schools, such as are

just beginning to appear in India, necessarily prevents the sufferer from learning to talk. Clear instructions were given to the enumerators to enter only persons who were congenitally afflicted. Some few, perhaps, may have been included in the return who had lost the power of speech or hearing after birth, but the total number of such mistakes is now very small. In India as a whole 74 males and 53 females per hundred thousand are deaf and dumb from birth. These proportions are much the same as those obtaining in European countries.

Blindness.—In India as a whole fourteen persons in every ten thousand of the population are blind, as compared with from eight to nine in most European countries and in the United States of America. It is a matter of common observation that blindness is ordinarily far more common in tropical countries than in those with a temperate climate. It is, however, less common in India than in parts of Eastern Europe; in Russia, for instance, nineteen persons in every ten thousand are blind.

Lepers.—In India as a whole 51 males and 18 females per hundred thousand persons of each sex are lepers. Of the different provinces, Assam suffers most, then Burma, and then in order Bihar and Orissa, the Central Provinces and Berar, Madras, Bengal, Bombay, the United Provinces, the Punjab and the North-West Frontier Province. In the two last-mentioned provinces there are only 17 male and 8 female lepers per hundred thousand of each sex. The occurrence of leprosy is very local and its prevalence varies enormously within provincial boundaries.

The number of lepers has fallen since 1891 from 126 to 109 thousand, a drop of more than 13 per cent. When it is remembered that the number of persons suffering from the other three infirmities taken together has remained almost stationary, it may be concluded that the decrease in the reported number of lepers is genuine and indicates a real diminution in the prevalence of the disease. It is possible that this is partly the result of the improved material condition of the lower castes, amongst whom leprosy is most common, and of a higher standard of cleanliness. The greater efforts which have been made in recent years to house the lepers in asylums may also have helped to prevent the disease from spreading. The total number of asylums in India is now 73, and they contain some five thousand inmates, or about 4.7 per cent. of the total number of lepers. This may not seem much, but it has to be remembered that the movement is still in its infancy and that progress has been very rapid in recent years. Complete statistics for 1901 are not readily available, but it is known that in the two provinces of Bengal and Bihar and Orissa, the number of lepers in asylums was then only about half what it is now. The greater part of the credit for the provision of asylums for these unfortunate persons belongs to the Mission for Lepers in India and the East, which receives liberal help from Government. Its latest report shows that there are 3,537 lepers in the forty asylums maintained by the Society.

The belief is growing that leprosy is communicated from one human being to another by some insect, and two South African doctors have recently published papers implicating the bed bug (*acanthia lectularia*). If this theory be correct it is obvious that the segregation of lepers in asylums must reduce the number of foci of the disease, and to that extent prevent it from spreading. It is worthy of note that in many of the districts where the disease was most prevalent in 1891, there has since been a remarkable improvement. Chamba which in 1891 had 34 lepers in every ten thousand of its population, now has only 15; in Birbhum the corresponding proportion has fallen from 35 to 16, in Bankura from 36 to 23, in Simla 29 to 18, in Dehra Dun from 20 to 11, in Garhwal from 17 to 10, in Burdwan from 22 to 14 and in North Arakan from 28 to 20.

OCCUPATIONS.

Nowhere are the many points of difference in the local conditions of India, as compared with those of western countries, more marked than in respect of the functional distribution of the people. In England, according to the returns for 1901, of every hundred actual workers. 58 are engaged in industrial pursuits, 14 in domestic service, 13 in trade and only 8 in agriculture, whereas in India 71 per cent. are engaged in pasture and agriculture and only 29 per cent. in all other occupations combined. The preparation and supply of material substances afford a means of livelihood to 19 per cent. of the population (actual workers) of whom 12 per cent. are employed in industries, 2 in transport and 5 in trade. The extraction of minerals supports only 2 persons per mille; the civil and military services support 14, the professions and liberal arts 15, and domestic service 18 persons per mille. The difference is due to the extraordinary expansion of trade and industry which has taken place in Western Europe during the last century in consequence of the discovery of the steam engine, and to the great improvement in means of transport and the use of mechanical power in factories of all kinds which have resulted therefrom. In Germany, sixty years ago, the agricultural population was very little less than it is at the present time in India. There are, as we shall see further on, indications that in the latter country also great changes are impending; and it is not unlikely that, as time goes on, the functional distribution of the people will become less dissimilar from that now existing in Europe.

The village.—Until the recent introduction of western commodities, such as machine-made cloth, kerosine oil, umbrellas and the like, each village was provided with a complete equipment of artisans and menials, and was thus almost wholly self-supporting and independent. Its chamars skinned the dead cattle, cured their hides, and made the villagers' sandals and thongs. Local carpenters made their ploughs, local blacksmiths their shares, local potters their utensils for cooking and carrying water, and local weavers their cotton clothing. Each village had its own oil-pressers, its own washermen, and its own barbers and scavengers. Where this system was fully developed, the duties and remuneration of each group of artisans were fixed by custom and the caste rules strictly prohibited a man from entering into competition with another of the same caste. The barber, the washerman, the blacksmith etc.,

all had their own definite circle within which they worked, and they received a regular yearly payment for their services, which often took the form of a prescriptive share of the harvest, apportioned to them when the crop had been reaped and brought to the threshing floor.

Village sufficiency declining.—Even in India proper the village is no longer the self-contained industrial unit which it formerly was, and many disintegrating influences are at work to break down the solidarity of village life. The rising spirit of individualism, which is the result of modern education and western influences, is impelling the classes who perform the humbler functions in the economy of village life to aspire to higher and more dignified pursuits. There is also a tendency to replace the prescriptive yearly remuneration by payment for actual work done. In many parts for instance, the village Chamar is no longer allowed the hides of dead cattle as his perquisite, but receives instead a payment for removing the cattle and for skinning them; and the hides are then sold to a dealer by the owner of the animal. Improved means of communication have greatly stimulated migration and the consequent disruption of the village community, and by facilitating and lowering the cost of transport of commodities, have created a tendency for industries to become localised. The extensive importation of cheap European piecegoods and utensils, and the establishment in India itself of numerous factories of the western type, have more or less destroyed many village industries. The high prices of agricultural produce have also led many village artisans to abandon their hereditary craft in favour of agriculture. The extent to which this disintegration of the old village organisation is proceeding varies considerably in different parts. The change is most noticeable in the more advanced provinces, whereas in comparatively backward tracts, like Central India and Rajputana, the old organisation remains almost intact.

Agriculture.—India is pre-eminently an agricultural country. Of its total population 72 per cent. are engaged in pasture and agriculture, *viz.*, 69 per cent. in ordinary cultivation and 3 per cent. in market gardening, the growing of special products, forestry and the raising of farm stock and small animals. The 217 million persons supported by ordinary cultivation comprise nearly 8 million landlords, 167 million cultivators of their own or rented land, over 41 million farm servants and field labourers and less than a million estate agents and managers and their employes.

On the average, in the whole of India, every hundred cultivators employ 25 labourers, but the number varies in the main provinces from 2 in Assam, 10 in the Punjab, 12 in Bengal and 16 in the United Provinces to 27 in Burma, 33 in Bihar and Orissa, 40 in Madras, 41 in Bombay and 59 in the Central Provinces and Berar. These local variations appear to be independent alike of the fertility of the soil and of the density of population. The conclusion seems to be that the differences are due to social, rather than economic, conditions, and that those provinces have most field labourers which contain the largest proportion of the depressed castes who are hereditary agrestic serfs.

Of the two million persons supported by the growing of special products rather more than half were returned in tea, coffee, cinchona, indigo, etc., plantations and the remainder in fruit, vegetable, betel, vine, arecanut, etc., growers. Of those in the former group, nearly nine-tenths were enumerated in the tea-gardens of Assam (675,000) and Bengal (248,000) and most of the remainder in the coffee, tea, rubber and other plantations of Southern India.

Of the 16 persons per mille who were classed under Raising of farm stock, nearly four-fifths were herdsmen, shepherds, and goatherds, rather more than one-seventh were cattle and buffalo-breeders, and keepers and one-eleventh sheep, goat and pig breeders.

Fishing and Hunting.—In the whole of India about 2 million persons, or 6 per mille subsist by fishing and hunting. Of these, all but a small fraction are fishermen. About half the total number are found in the two provinces of Bengal (644,000) and Madras (313,000). The number who live by this occupation is exceptionally small in the United Provinces (38,000) and Punjab (10,000). The Punjab Superintendent says that, owing to the destruction of immature fish and fry and the obstruction of the free passage of fish to their spawning grounds, the five thousand odd miles of large rivers and major canals in his Province probably produce less food than an equal volume of water in any other part of the world. The sea fisheries of India, though now known to be very valuable, are at present but little exploited.

Mines.—In the whole of India only 530,000 persons or 17 in every ten thousand are supported by the extraction of minerals. Coal mines and petroleum wells account for about half the total number (277,000). The coal fields of Bihar and Orissa support 127,000 persons and those of Bengal 115,000. In the Manbhum district, which contains the Jherria, and part of the Raniganj coal field, 111,000 persons or 7 per cent. of the inhabitants are supported by work in the collieries. Though the Raniganj coal field was discovered as far back as 1774 many years elapsed before much use was made of the discovery. In 1840 the total quantity of coal sent to Calcutta was only 36,000 tons. It rose to 220,000 tons in 1858 and to six million tons in 1901. Since then the growth has been very rapid. The output in 1911 from the coal mines of Bengal and Bihar and Orissa exceeded eleven million tons. In the same year the total yield for all India was twelve million tons. Of the latter quantity nearly one million tons were exported, and four million were used by the railways. The total output however is still trivial compared with that of the United Kingdom, which amounted in 1911 to 272 million tons. Most of the persons employed in the mines of Bengal and Bihar and Orissa are aboriginal or quasi-aboriginal; about half are Bauris and Santals, and many of the remainder belong to the Bhuiya, Chamar or Mochi, Kora, Rajwar, Dosadh and Musahar castes. The great majority are recruited locally. The coal mines of Hyderabad, Assam, the Central Provinces and Berar, and the Punjab support between them only about 27,000 persons.

Metals.—Of the 98,000 persons supported by mining for metals, more than half were returned

in the Mysore State, and of these the great majority were employed in the gold mines of Kolar, where for some years past the value of the gold produced has been about £2,000,000 per annum. The mines in the Central Provinces and Berar, which support 21,000 persons, are principally for the extraction of manganese. The mining of this ore was greatly fostered by the Japanese War, which caused Russia to discontinue her exports of it for the time. There has since been a period of depression, which seems now to have come to an end. Manganese is extracted elsewhere also, *e.g.* in Mysore and Madras. In Burma tin and lead are extracted as well as silver and wolfram in small quantities. Iron ore is worked in various places, but chiefly in Mayurbhanj which supplies the raw material for Messrs. Tata and Company's ironworks at Sakchi.

Of the 75,000 persons supported by work in quarries and mines for non-metallic minerals, other than coal and salt, two-fifths were enumerated in Bombay, where the quarrying of stone and limestone is an important business chiefly in the neighbourhood of Bombay city. In Bihar and Orissa and Madras mica mining is of some importance.

The extraction of salt and saltpetre supports 78,000 persons. Nearly a third of the total number are found in Bihar and Orissa where the Nuniyas are still largely employed in digging out and refining saltpetre. This industry is carried on also in the Punjab. Rock salt is mined in the same province and in Rajputana.

The total number of persons employed in the extraction of minerals has risen during the decade from 235 to 517 thousand. The most noticeable increase is in Coal mines and petroleum wells which employ nearly three times as many persons as in 1901. The bulk of the increase has occurred in Bengal and Bihar and Orissa, but it is to be noted that Hyderabad and the Central Provinces and Berar which now contribute about 12,000 persons to this group gave practically none ten years previously. Miners for metals are $2\frac{1}{2}$ times as numerous as they were in 1901.

Industries.—Of the 35·3 million persons dependent on industrial occupations, nearly one-fourth, or 2·6 per cent. of the total population, are supported by textile industries. Of these, the most important, from a numerical point of view, are industries connected with cotton. The number of persons supported by cotton spinning, sizing and weaving is close on 6 millions, and another half million are employed in ginning, cleaning and pressing the raw material. The proportion of the population supported by cotton spinning, sizing and weaving is 37 per mille in the Punjab, 29 in Bombay and Rajputana, 27 in Madras, 22 in the Central Provinces and Berars and 18 in the United Provinces. In Burma, Bihar and Orissa, Bengal and Assam it is much smaller, ranging only from 8 to 11 per mille. Nearly two-fifths of a million persons are supported by rope, twine and string making, and more than a third of a million by jute spinning, pressing and weaving. Other important textile industries are wool spinning and weaving, silk spinning and weaving, and dyeing and printing, etc., each of which supports from a quarter to a third of a million persons. It is clear therefore that so far as India is concerned, in spite of the growing number of cotton mills in the Bombay Presidency and elsewhere, the hand industry still, to a great extent, hold its own. Only 13,000 persons are employed in silk spinning and weaving factories, 7,000 in woollen factories including those for the making of carpets and even smaller numbers in other factories of this class. Some of these textile industries are very local. Those connected with jute are practically confined to Bengal, in which province nine-tenths of the persons supported by them were enumerated. More than half the persons dependent on rope, twine and string making and on working in 'other fibres' chiefly coir, and palmyra fibre were enumerated in Madras and its Native States and a quarter of those supported by wool industries in Hyderabad. Half the silk spinners and weavers are found in two provinces, Bengal and Madras. The dyeing, bleaching and printing of textiles and lace, crape and similar industries are almost unknown in Assam, Bengal, Burma and the Central Provinces and Berar.

Growth of Industry.—As compared with 1901 there has been a decrease of 6·1 per cent. in the number of persons supported by textile industries. This is due mainly to the almost complete extinction of cotton spinning by hand. Weaving by hand has also suffered severely from the competition of goods made by machinery both in Europe and in this country. There has been a large increase in the number of Indian cotton mills, but as the output per head in factories is far greater than that from hand-looms, the addition of a given number of factory hands involves the displacement of a far larger number of hand workers.

Hides.—As compared with 1901, a large decline in the number returned as general workers in hides is partly compensated for by an increase in shoe, boot and sandal makers. In the two heads taken together there has been a drop of about 6 per cent. During the same period the number of hide dealers has more than doubled. Owing to the growing demand for hides in Europe and America and the resulting high prices, the export trade in hides has been greatly stimulated. The local cobbler, on the other hand, having to pay more for his raw material and feeling the increasing competition of machine-made goods has been tempted to abandon his hereditary craft for some other means of livelihood, such as agriculture or work in factories of various kinds.

Woodworkers.—Wood cutting and working and basket making support 2·5 and 1·3 million persons, respectively, or 3·8 million in all. The number of factories devoted to these industries is still inconsiderable. Saw mills and timber yards each employ some 12,000 persons and carpentry works about 5,000. There is only one cane factory with 46 employes.

Metal workers.—The workers in metals are only about half as numerous as those in wood and cane. About three-quarters of the persons in this order are general workers in iron, and one-seventh are workers in brass, copper and bell-metal.

The total number of persons dependent on metal industries shows a decline of 6·6 per cent. as compared with 1901.

Earthenware.—The manufacture of glass, bricks, and earthenware supports in all 2·2 milli-

on persons. Seven-eights of these are the ordinary village potters who make the various earthenware utensils for cooking and storing water which are required by the poorer classes, as well as tiles, rings for wells and the like. In most parts of India the potter, like the carpenter, oil-presses, blacksmith and cobbler, is found in practically every village.

Chemicals.—In a country like India, whose economic development is still backward, it is not to be expected that a large number of persons should be engaged in industries connected with chemical products. The total number returned as supported by these industries exceeds a million but it shrinks to less than 100,000 if we exclude manufacture and refining of vegetable and mineral oils. The 1·1 million persons included in this group are almost entirely village artisans who extract oil from mustard, linseed, etc., grown by their fellow villagers.

Food Industries.—Of the 3·7 million persons supported by food industries the great majority follow occupations of a very primitive type. Rice pounders and huskers and flour grinders number 1·6 million, grain parchers, etc., 0·6 million, and toddy drawers about the same. There are 352,000 butchers, 281,000 sweetmeat makers, etc. and 97,000 bakers and biscuit makers. The other five heads of the scheme contain between them only 227,000 persons. The principal factories in connection with food industries are flour and rice mills, which employ 42,000 persons, sugar factories 8,000, opium, ganja and tobacco factories 7,000 and breweries 5,000

Dress.—In all 7·8 million persons are supported by industries of dress and the toilet. Of these 1·3 millions are grouped under the head tailors, milliners, dressmakers, etc., and 2·1 million under each of the heads (*a*) shoe, boot and sandal makers, (*b*) washermen, cleaners and dyers, and (*c*) barbers, hair-dressers and wig-makers

Transport.—Transport supports about five million persons, or 16 per mille of the population, *viz.*, transport by water one million, transport by road 2·8 million, transport by rail one million, and the post, telegraph and telephone services 0·2 million. Transport by water, about three-fifths are owners of country boats and their boatmen; nearly one-sixth are employed on inland steamers and ocean-going vessels of all kinds, one-sixth are engaged in the construction and maintenance of canals, and one-twentieth in the management and upkeep of harbours. Transport by road includes one million carters and cart-owners, more than half a million porters and messengers and considerably less than that number of owners and drivers of pack animals. Palki owners and bearers number 202,000 and persons engaged on road construction and maintenance 563,000.

Trade.—The number of persons dependent on trade for their livelihood is 17·8 millions, or 6 per cent. of the population. Of these, more than half are supported by trade in food stuffs, including 2·9 million grocers and sellers of vegetable oil, salt and other condiments, who are for the most part the petty village shop-keepers, commonly known as salt and oil sellers; 2·2 million grain and pulse dealers; 1·6 million betel leaf, vegetables and fruit sellers, and nearly a million fish vendors. Trade in textiles is the next most important item, supporting 4 per mille of the population. In connection with these figures it is necessary to draw attention to the great difference which exists between the economic conditions of India and those of Europe. In Europe the seller is almost invariably a middleman, whereas in India he is usually the maker of the article, and is thus classified under the industrial and not the commercial head.

Professions.—The public administration and the liberal arts support 10·9 million persons or 35 per mille, namely, public force 2·4 million, public administration 2·7 million, the professions and liberal arts 5.3 million, and persons of independent means about half a million. The head Public force includes the Army (0·7 million), the Navy (less than 5,000) and the Police (1·6 million). India has practically no navy and her army is exceptionally small, as compared with those of European countries. The number of persons actually employed in it is only 384,000 or 1 per mille of the population, as compared with 4 per mille in England and 10 in Germany. The figures for Police include village watchmen and their families. The real number in this group is greater than that shown in the census tables; many of these village officials have other means of susbsistence, and the latter were sometimes shown as their principal occupation. Under the head Public administration are classed only those persons who are directly engaged in the Executive and Judicial administration and their establishments, whether employed directly under Government or under a municipality or other local body. Employees of Government and local bodies who have a specific occupation of their own, such as doctors, printers, school-masters, land surveyors, etc., are shown under the special heads provided for these occupations. Of the 5·3 million persons supported by the professions and liberal arts, Religion accounts for rather more than half, Letters and the arts and sciences for more than a sixth, Instruction and Medicine for one-eighth, and Law for one-eighteenth. The main head Religion contains 1·6 million priests, ministers, etc., 0·7 million religious mendicants, 0·4 million pilgrim conductors, circumciser and persons engaged in temples, burial or burning ground service, and 0·06 million catechists and other persons in church and mission service. Of Law, more than half are lawyers, law agents and mukhtiars and the remainder lawyers' clerks and petition writers. More than two-thirds of the persons under the Medical head are medical practitioners of various kinds, including dentists: the remainder are midwives, vaccinators, compounders, nurses etc. The real number of persons who act as midwives must exceed considerably that shown in the return. This service is usually performed by the wife of the village scavenger or other person of low caste; and she must often have been returned under her husband's occupation. Nearly three-fourths of the persons classed under Letters and the arts and sciences are found in Music composers and masters, players on musical instruments, singers, actors and dancers. The bulk of these are village drummers, whose services are invariably requisitioned on the occasion of marriages and religious festivals.

Factories.—There are in the whole of India 7,113 factories employing 2·1 million persons or 7 per mille of the population. Of these per-

sons, 810,000, or two-fifths of the total number are employed in the growing of special products, 558,000 in textile industries, 224,000 in mines, 125,000 in transport, 74,000 in food industries, 71,000 in metal industries, 49,000 in glass and earthenware industries, the same number in industries connected with chemical products and 45,000 in industries of luxury. Of the special products, tea (703,000 employees) is by far the most important. The number of tea gardens is not much more than double that of coffee plantations, but twelve times as many persons are employed on them. The coffee plantations are four times as numerous as indigo concerns and employ twice as many labourers. Of the labourers on tea gardens, 70 per cent. are returned by Assam and 27 per cent. by Bengal. Madras, Mysore and Coorg contain between them practically all the coffee plantations, and Bihar and Orissa all the indigo factories. Of the persons working in mines, 143,000, or 64 per cent. are found in collieries, eight-ninths of them being in the two provinces of Bihar and Orissa and Bengal. The number of persons engaged in gold mines is about one-fifth of the number in the coal mines: nine-tenths of them were returned from Mysore. Of the 558,000 workers, in textile industries, cotton mills contribute 308,000 and jute, hemp, etc. 222,000. About two-thirds of the persons employed in cotton mills are found in the Bombay Presidency, from 8 to 9 per cent. in the Central Provinces and Berar and Madras, and about half this proportion in the united Provinces and Bengal. Jute mills are a monopoly of Bengal. Of the industries connected with transport, railway workshops are by far the most important and afford employment to 99,000 persons, or 79 per cent. of the total number of persons engaged in these industries: about one-fourth of them are found in Bengal and one-sixth in Bombay. Of the factories connected with food industries, the most prominent are rice and flour mills. These employ 42,000 persons, of whom nearly three-fourths are engaged in the rice mills of Rangoon and other places in Burma.

Indians and Europeans.—The proportion of Indians to Europeans varies considerably in different classes of factories. The great majority of the larger concerns are financed by European capital, and in such cases management or direction is generally European, and the Indians shown under this head are engaged for the most part on supervision and clerical work. In Assam where 549 tea gardens are owned by Europeans and 60 by Indians, there are 536 European and 73 Indian managers. In the coffee plantations of Madras and Mysore the same principle is apparent. The jute mills of Bengal are financed by European capital and the managers are all Europeans; while in Bombay where Indians own 110 of the cotton spinning and weaving mills, and share 25 with Europeans, and the latter own exclusively only 12, all but 43 of the managers are Indians. Sometimes the proportion of Europeans employed in supervision, etc., varies with the character of the work. In the gold mines where the planning and control of the deep underground workings require a high degree of skill, Europeans outnumber Indians in the ratio of nearly 4 to 1, whereas in the collieries Indians are twelve times as numerous as Europeans.

Anglo-Indians.—Anglo-Indian is used at the census as the designation of the mixed race, descended usually from European fathers and Indian mothers, which was formerly known as Eurasian. The total number of persons returned under this head, excluding Feringis, is now 100,451 or 15 per cent. more than in 1901. Anglo-Indians are most numerous in Madras (26,000 and Bengal (20,000). In the United Provinces, Bombay and Burma the number ranges from 8 to 11 thousand, and in Bihar and Orissa, the Central Provinces and Berar and the Punjab it is about 3,500. In the States and Agencies Anglo-Indians aggregate only 14,000, more than half being found in Mysore and Hyderabad. The increase in their number as compared with 1901 may be due partly to some Anglo-Indians having returned themselves under their new designation who would have claimed to be Europeans if Eurasian had been the only alternative and it is also perhaps due in part to a growing tendency amongst certain classes of Indian Christians to pass themselves off as Anglo-Indians. The Punjab Superintendent accounts in this way for the greater part of the increase of 42 per cent. in the number returned as Anglo-Indians in his province. The proportional increase is also large in the United Provinces, Bombay, Burma, the Central Provinces and Berar and the Cochin State. Although Madras still has the largest number of Anglo-Indians, the total is slightly less now than it was twenty years ago. Possibly this is because more careful enumeration has reduced the number of Indian Christians who thus returned themselves. The number of Anglo-Indians in Burma is remarkably large in view of the comparatively short time that has elapsed since it became a British possession and the strength of its European population. In this community there are 984 females per thousand males, or slightly more than the corresponding proportions in the general population of India. More than half of the persons returned as Anglo-Indians are Roman Catholics, and one-third are Anglicans; the number of Presbyterians, Baptists, and Methodists ranges from 2 to 2½ per cent.

Education.

Indian Education is unintelligible except through its history. Seen thus it affords the spectacle of a growth which, while to one it will appear as a huge blunder based on an initial error of judgment easily avoided, to another it stands out as a symbol of sincerity and honest endeavour on the part of a far-sighted race of rulers whose aim has been to guide a people alien in sentiments and prejudices into the channels of thought and attitudes best calculated to fit them for the needs of modern life and western ideals. A careful survey of the history of Indian Education will reveal the opposition between two tendencies whose struggle for supremacy was finally decided by Lord Macaulay's Minute of 1835. The beginnings of public education in India belong to a generation before Macaulay's regime. But it was not till Macaulay poured such emphatic contempt on Oriental learning that the Government in India in general definitely chose the path of English education as the road to future progress. Macaulay's Minute crystallises a point of view which had already some years before begun to impress itself upon educationists in this country. And when we find a statesman of the acumen of Lord Curzon saying ' Ever since the cold breath of Macaulay's rhetoric passed over the field of the Indian languages and Indian text books, the elementary education of the people in their own tongue has shrivelled and pined," we must not suppose that he regarded Macaulay as solely responsible for the trend which modern education has taken. It needs but a cursory glance at the history of education in India under British rule to make clear once for all that education on Western lines was necessary as an answer to a growing demand which none but callous rulers could refuse, as also for the very forcible reason that without some kind of organised training of Indians in English composition and ideas the practical work of administration which demands an ever-increasing number of clerical assistance to meet the needs of steadily accumulating office work, could never have been carried on. These two points give one the clue to the main features of Indian education ; (1) the claim of newly-awakened races to be allowed to substitute for their own lifeless earning the progressive culture of modern Western thought; and (2) the obvious utility of a system whose object should be, in part at least, to assist Indians to a development of their capacities and sympathies on lines which might be of service in the actual government of the country. With reference to this last point the following consideration may be urged. The object of our great Universities and Public Schools in England is generally admitted to be something more than the satisfaction of purely theoretical interests. They are meant to be the training ground of capable public servants. Let us once admit this to be a necessity in England; if then we recognise the impossibility of administering the great Indian Empire through Englishmen alone, there seems to be no adequate reason for refusing to apply the same methods to India. And as there is nothing in Indian History to show the particular value of any Oriental system of education as a training for public service, the logical conclusion is that Indians should be educated in English along Western lines. If an observer were confronted with a country ruled by foreign administrators backed up by a foreign army, he would infer on a priori grounds that the said foreign power had included in its legislation a system of education analogous to its own—if his opinion of it had not led him to suppose that it had adopted the sceptical or ungenerous policy of not educating its subjects at all. That would present itself as the only possible alternative. And the problem of Indian Education may be said to resolve itself into a doubt which of the two policies is preferable, that of non-education or that of English education. Yet the doubt itself has only to be stated to be solved. And the task of explaining Indian education becomes in the end simply one of showing how the initial encouragement on the part of British rulers of Oriental learning did not so much begin education as foster the desire for education, until at last the Government undertook the duty of guiding such aspirations into what it conceived to be the right channel. To this end our aim will be to show (1) Indian education in the stage of conception, and its birth somewhere about the time of Macaulay's Minute, (2) its growth and organisation, (3) its present situation.

THE BIRTH OF INDIAN EDUCATION.

The seeds of an interest in education may be said to have been sown by the foundation of the Calcutta Madrasa by Warren Hastings in 1781, and the Sanskrit College at Benares by Jonathan Duncan in 1791. Whatever interest there was in learning during this period was directed solely to the encouragement of Sanskrit and Arabic. Even the Act of 1813 which set apart a lakh of rupees for "the revival and promotion of literature and the encouragement of learned natives of India, and for the introduction and promotion of a knowledge of the sciences in the British territories of India" was interpreted as a scheme for the encouragement of Sanskrit and Arabic ; and it was not till the famous meeting of the Governor-General's Council in 1835 that it was definitely discussed whether it might not accord with the meaning of the Act of 1813 to use at least part of the money for the encouragement of the study of English. But other forces had been already at work. In 1817 the Hindu College was opened at Calcutta with the express object of instructing "the sons

Statement of Educational Progress in INDIA.

	1911-12.	1912-13.	1913-14.	1914-15. ‡	1915-16.	1916-17.
Area in square miles	1,135,513	1,137,686	1,137,686	1,029,399	1,032,011	1,088,944
Population { Male	130,408,551	130,302,188	130,302,188	124,182,692	124,190,672	124,747,805
Population { Female	124,960,002	124,851,633	124,851,633	118,806,255	118,812,827	119,273,295
Total Population	255,368,553	255,153,821	255,153,821	242,988,947	243,003,499	244,021,100
Public Institutions for Males.						
Number of arts colleges	130	128	138	136	136	122
Number of high schools*	1,219	1,273	1,349	1,382	1,440	1,584
Number of primary schools	110,692	113,955	116,650	116,012	120,818	124,081
Male Scholars in Public Institutions.						
In arts colleges	29,369	32,931	38,836	41,441	45,349	46,203
In high schools *	390,881	428,182	463,386	483,249	502,681	547,313
In primary schools	4,202,631	4,428,541	4,609,405	4,518,044	4,645,046	4,782,605
Percentage of male scholars in public institutions to male population.	4·0	4·3	4·5	4·6	4·7	4·8
Public Institutions for Females.						
Number of arts colleges	10	10	11	11	11	12
Number of high schools*	135	144	157	158	158	166
Number of primary schools	12,886	13,694	14,722	15,700	17,231	18,122
Female Scholars in Public Institutions.						
In arts colleges	279	318	353	406	469	842
In high schools*	16,884	18,515	21,085	22,234	23,254	24,948
In primary schools	785,511	832,962	909,966	929,846	993,198	1,036,125
Percentage of female scholars in public institutions to female population.	·70	·74	·81	8·9	·94	·97
TOTAL SCHOLARS in public institutions { Male	5,253,065	5,559,841	5,823,215	5,762,417	5,871,184	6,050,840
TOTAL SCHOLARS in public institutions { Female	875,660	928,983	1,019,621	1,054,161	1,112,024	1,156,468
TOTAL SCHOLARS in public institutions Total	6,128,725	6,488,824	6,842,836	6,816,578	6,983,208	7,207,308
TOTAL SCHOLARS (both male and female) in all institutions.	6,780,721	7,149,663	7,518,147	7,448,419	7,617,496	.....
Expenditure (in thousands of rupees).						
From provincial revenues	2,69,59	3,39,25	3,64,54	4,22,72	3,94,90	3,91,63
From local funds	1,05 80	1,23,08	1,47,91	1,66,79	1,80,38	1,73,79
From municipal funds	29,84	33,28	37,66	43,51	46,41	49,39
Total Expenditure from public funds	4,05,23	4,95,61	5,50,11	6,33,02	6,21,69	6,14,81
From fees	2,19,09	2,40,52	2,66,64	2,85,63	3,03,51	3,18,71
From other sources	1,61,61	1,65,96	1,85,49	1,73,05	1,83,09	1,95,31
GRAND TOTAL OF EXPENDITURE	7,85,93	9,02,09	10,02,24	10,91,70	11,08,29	11,28,83

* High schools include vernacular high schools also, in some provinces.

‡ The statistics of Native States have been excluded from the Tables for 1914–15 and subsequent years.

of Hindus in the European and Asiatic languages and sciences," English being assigned the most prominent position. The moving spirit which led to the foundation of this institution was Raja Ram Mohan Roy who in the words of Mr. H. R. James in his important book "Education and Statesmanship in India," "incarnates the impulse which led thinking Indians to desire and work for English Education." From that time forward the far-sighted observer must have realised that a movement had begun which, whether we would or not, we could no longer check. The same phenomenon was witnessed on the Western side of India; and Mountstuart Elphinstone's Minute on Education, dated March 1824, deserves particular notice for its recognition of the necessity of introducing a knowledge of European sciences into any scheme of education as well as for its wise restraint in dealing with Oriental learning. For though his declared object was to establish English schools and encourage the natives in the pursuit of European sciences, he repudiates the idea that the purely Hindu side of education should be totally abandoned. In his own words: "It would surely be a preposterous way of adding to the intellectual treasures of a nation to begin by the destruction of its indigenous literature; and I cannot but think that the future attainments of the natives will be increased in extent as well as in variety by being, as it were, engrafted on their own previous knowledge and imbued with their own original and peculiar character." Elphinstone's interest in educational matters was sufficiently appreciated by the citizens of Bombay who in 1827, the year of his departure, resolved to found two professorships in his memory "to be held by gentlemen from Great Britain until the happy period when natives shall be fully competent to hold them." It is sufficiently clear not only that an interest had been aroused in English education but that some attempts had been made to meet the interest before 1835, though Lord Curzon may have given a just estimate of the situation at the Educational Conference of Simla in 1901 when he said: "Education there was; but it was narrow in its range, exclusive and spasmodic in its application, religious rather than secular, theoretical rather than utilitarian in character Above all, it wholly lacked any scientific organisation and it was confined to a single sex."

GROWTH AND ORGANISATION OF ENGLISH EDUCATION IN INDIA.

It is, of course, just the possibility of engrafting modern western knowledge on the old Indian stocks that is open to doubt. Herein lies the significance of Macaulay's famous tirade on Oriental science, which deserves quoting for the contrast it forms to the juster estimate of Mountstuart Elphinstone. It is perhaps more offensive to Indian ears for the element of truth it contains, though the entirely unsympathetic form in which he expresses himself is a sufficient stumbling-block in itself. "The question before us," he writes, "is simply whether, when it is in our power to teach this language—English—we shall teach languages in which, by universal confession, there are no books on any subject to be compared to our own; whether, when we can teach European science, we shall teach systems which, by universal confession, wherever they differ from those of Europe, differ for the worse; and whether, when we patronise sound philosophy and true history, we shall countenance at the public expense, medical doctrines which would disgrace an English farrier, astronomy which would move laughter in the girls at an English boarding-school, history abounding with kings thirty feet high and reigns thirty thousand years long, and geography made up of seas of treacle and seas of butter." The reiterated phrase 'by universal confession' is beyond the mark; but Macaulay was surely right in his valuation of ancient Hindu science *as science* or history *as history*. Where he was surely wrong was in his implied condemnation of Indian literature *as literature*. From that point of view you might just as well condemn Homer for his mythology (as indeed Plato does in the Republic). Where, again, he was possibly wrong was in his vehement antipathy to the view that, if modern science is to be taught; it should be taught through the medium of Indian languages. Yet here too he represents an attitude which was fast becoming that of enlighted Indians. And, if there were no other reasons, the ultimate utility to the Government itself of Indians trained in the English language is a strong argument in his favour. This utilitarian motive for English education lurks often unconscious and unrecognised under the whole progress of Indian education —to its detriment as some think, for the great charge against the modern Indian student is that he regards a career in Government schools and colleges not so much as education and an end in itself as a mere means to more or less lucrative employment in Government offices. Be that as it may, we shall probably not be far wrong in saying that the famous Minute of 1835 was in spirit right but in expression wrong. Its result was that the Government of Lord William Bentinck made the following momentous Resolution: "His Lordship in Council is of opinion that the great object of the British Government ought to be the promotion of European literature and science among the natives of India, and that all the funds appropriated for the purposes of education would be best employed on English education alone."

Universities Established.

Macaulay's period of service on the Committee of Public Instruction (first formed in 1824) gave considerable impetus to the movement he advocated, as figures will show. Whereas the Committee had no more than fourteen institutions under its control in Bengal when he joined it, this number was more than trebled by the end of 1837, the larger part

INDIA.

The two tables given below afford useful comparisons with previous years and serve to illustrate the growth and expansion of education in India :—

(*a*) STUDENTS.

Year.	Public Institutions.			All Institutions (Public & Private).		
	Males.	Girls.	Total.	Males.	Girls.	Total
1886-87	*2,764,751	*206,108	2,970,859	*3,115,808	*277,736	3,343,544
1891-92	3,041,510	307,400	3,348,910	3,517,778	339,043	3,856,821
1896-97	3,428,376	360,006	3,788,382	3,954,712	402,158	4,356,870
1901-02	3,493,325	393,168	3,886,493	4,077,430	444,470	4,521,900
1906-07	4,164,832	579,648	4,744,480	4,743,604	645,028	5,388,632
1911-12	5,253,065	875,660	6,128,725	5,828,182	952,539	6,780,721
1915-16	5,871,184	1,112,024	6,983,208	6,431,215	1,186,281	7,617,496
1916-17	6,050,840	1,156,468	7,207,308	6,621,527	1,230,419	7,851,946

* These figures do not include the girls in boys' schools, or the boys in girls' schools, as the case may be.

(*b*) EXPENDITURE.

Year.	Direct Expenditure.		Direct and Indirect.	
	Public Funds.	Total.	Public Funds.	Total.
	Rs.	Rs.	Rs.	Rs.
1886-87	*....	1,98,31,316	1,34,81,812	2,52,42,414
1891-92	1,07,55,368	2,40,93,149	1,56,18,184	3,05,19,632
1896-97	1,19,85,647	2,77,38,737	1,67,65,650	3,52,44,900
1901-02	1,26,28,586	3,06,37,633	1,77,03,968	4,01,21,462
1906-07	1,88,31,204	3,88,67,352	2,96,34,574	5,59,03,673
1911-12	2,57,57,212	5,39,41,277	4,05,23,072	7,85,92,605
1915-16	3,96,61,135	7,47,43,004	6,21,68,904	11,08,29,249
1916-17	4,18,12,109	7,92,86,819	6,14,80,471	11,28,83,068

* No information.

being Anglo-Vernacular schools or colleges. Progress continued along these lines in Bengal and more slowly in other Presidencies, until in 1852 the numbers under instruction in Government colleges amounted to 25,372 of which 9,893 were for English education (James p.34). The increase of numbers must have been materially affected by a Resolution of Lord Hardinge's Government in 1844 in which it was stated that in the selection of candidates for public employment, preference would be given to those who had been educated in the newly fashioned type of institution. An adherent of the old-fashioned intellectual ideal of college life would see in this Resolution a fatal concession to the utilitarian view and a fatal misdirection of public attitude towards education.

Meanwhile educational institutions had so multiplied throughout India that the time was becoming ripe for the decisions arrived at in Sir Charles Wood's Despatch of 1854. The old idea had been that the education imparted to the higher classes of society would gradually 'filter down' to the lower classes. How little true it is that education could ever filter down to the masses in India by its own percolative properties is evident enough even now when our wide system of schools entirely fails to touch the majority of India's population. The Despatch of 1854 marks a departure from the 'filtration' policy and a recognition on the part of an enlightened Government of educational duties, even towards sections of the population who had never entertained the idea of Government obligations in their direction. The result of the Despatch was the formation of Departments of Public Instruction on lines which do not differ at all essentially from Departments of Public Instruction of the present day. They represent a direct desertion of the *laissez faire* or *filtration* policy, and an attempt on the part of Government to "combat the ignorance of the people which may be considered the greatest curse of the country." Another feature of the Despatch was an outline of a 'University' system, which formed the basis of the scheme adopted in 1857 when Acts were passed for the incorporation of three Universities, one for Calcutta, one for Bombay and one for Madras. As Lord Curzon said: "The Indian Universities may be described as the first fruits of the broad and liberal policy of the Education Despatch of 1854." He might have gone further and said that the scheme outlined in it not only originated Universities but contained suggestions for their proper conduct whose value has only recently been understood. In its proposal of a distinction between "common degrees" and "honours" degrees it anticipates the actual procedure of at least one University, that of Bombay, by nearly sixty years.

Private Agencies.

The Despatch of 1854 and the orders based on it, together with later resolutions and modifications, organised education into something like the present system. Government took the whole thing into its own hands and established Universities, colleges, high schools and middle schools. Efforts were made to extend elementary education so as to reach the masses and also to establish a system of inspection with a view to guaranteeing the efficiency of private institutions which should be allowed grants-in-aid as well as Government Institutions themselves. Expansion under control sums up the aims of this combined system of grants-in-aid and inspection. As Mr. James puts it: "Local management under Government inspection stimulated by grants-in-aid, was to supplement and finally, perhaps, in large measure, to supersede direct management by Government." (p. 48) The latter part of the sentence may have been the inspiration of the Commission of 1882 appointed to inquire into the way in which the recommendations of the Despatch of 1854 had been carried out. The result of the Commission was to relax the control exercised by Government over education. Government's withdrawal was intended to refer only to secondary instruction. The idea was to encourage private enterprise in the founding of secondary schools. But though the recommendations of the Commission included much talk of conditions and cautions and of the necessity of maintaining a high standard, the addition of a further recommendation that the managers of aided schools and colleges be permitted, if they wished, to charge lower fees than Government schools of the same class led in the result to a general deterioration of standard. The recommendations of this Commission appear to some as a charter of inefficiency. They are the avenue to educational institutions run as a business proposition. Meanwhile, perhaps the most creditable feature of the Commission's Report was its insistence on the importance of Primary Education and its recommendation "that primary education be declared to be that part of the whole system of Public Instruction which possesses an almost exclusive claim on local funds set apart for education and a large claim on provincial revenues." The least creditable feature is its recommendation "that preference be given to that system which regulates the aid given mainly according to the results of examination." To pay by results is wilfully to encourage the cramming institution.

Great Expansion.

The period from 1882 to the beginning of the new century is one of phenomenal expansion. There was a general stampede for education, and no proper regard was paid to the standard or quality of the product. It is this period which if any deserves the opprobrium incurred by education in India. And it is the universities which stand out as the chief sinners. There can be no reasonable doubt that students were being turned out with degrees attached to their names who could not be regarded as educated from any respectable standpoint. As a man who is doubtful whether an act of his really is so praiseworthy as the general chorus of congratulation had led him to suppose, suddenly, with tremors at the thought of the revulsion of opinion that is sure to follow if he turns out to have done wrong, feels certain of his error, so our Governors and Chancellors and Vice-Chancellors of this period gradually arrived at the conviction that something was wrong with the seemingly excellent product

Statement of Educational Progress in MADRAS.

	1911–12.	1912–13.	1913–14.	1914–15	1915–16.	1916–17.
Area in square miles	142,491	No change.	No change.	142,330	No change.	No change.
Population { Male	20,389,666			20,382,955		
Population { Female	21,029,264			21,022,449		
Total Population	41,418,930			41,405,404		
Public Institutions for Males.						
Number of arts colleges	30	29	34	34	37	38
Number of high schools	168	171	176	182	183	188
Number of primary schools	24,044	25,223	26,018	26,917	28,166	28,881
Male Scholars in Public Institutions.						
In arts colleges	4,893	5,491	7,028	8,180	8,469	7,726
In high schools	71,894	77,581	85,364	93,367	97,993	105,402
In primary schools	829,331	889,393	952,035	999,685	1,048,380	1,071,636
Percentage of male scholars in public institutions to male population.	4·6	4·9	5·3	5·6	5·9	6·0
Public Institutions for Females.						
Number of arts colleges	2	2	2	3	3	3
Number of high schools*	33	32	35	35	35	36
Number of primary schools	1,162	1,281	1,443	1,527	1,619	1,692
Female Scholars in Public Institutions.						
In arts colleges	46	56	66	104	134	184
In high schools*	4,510	4,689	5,491	5,929	6,223	6,558
In primary schools	199,719	223,835	248,214	265,623	280,558	293,185
Percentage of female scholars in public institutions to female population.	·99	1·1	1·2	1·3	1·4	1·4
TOTAL SCHOLARS in public institutions { Male	943,369	1,011,753	1,085,348	1,140,713	1,198,328	1,229,914
TOTAL SCHOLARS in public institutions { Female	209,517	234·197	259·706	277·187	293,617	3,07.125
Total	1,152,886	1,245,950	1,345,554	1,417,840	1,491,945	1,537,039
TOTAL SCHOLARS (both male and female) in all institutions.	1,280,065	1,362,182	1,469,945	1,542,955	1,615,159	1,661,012
Expenditure (in thousands of rupees).						
From provincial revenues	44,22	58,20	65,69	66,71	68,55	76,93
From local funds	12,28	17,27	(*a*) 23,94	29,20	30,30	29,03
From municipal funds	3,15	4,15	(*b*) 5,63	8,50	8,64	4.76
Total Expenditure from public funds	59,65	79,62	95,26	1,04,41	1,07,49	1,12,75
From fees	37,90	41,44	46,06	50,91	54,70	58,29
From other sources	38,10	36.56	38,67	38,21	44,33	45,84
GRAND TOTAL OF EXPENDITURE	1,35,65	1,57,62	1,79,99	1,93,53	2,06,52	2,16,88

* Include also vernacular high schools for girls.

(*a*) Includes provincial contribution of Rs. 13,07,994.

(*b*) Includes provincial contribution of Rs. 1,62,669.

of the Despatch of 1854 and the Commission of 1882. Criticism began from without, but finally it invaded the sphere of Convocation addresses. At last in 1901 the Vice-Chancellor of the University of Calcutta made this statement: "For the first time, the Chancellor asks the University to consider the possibility of constitutional reform." In September of that year an educational conference was convened at Simla by the Viceroy Lord Curzon. In 1902 the Indian Universities Commission was appointed and in 1904 an Act was passed to amend the law relating to the Universities of British India.

UNIVERSITIES ACT AND PRESENT SITUATION.

The Commission of 1882, which favoured the policy of withdrawing higher education from the control of Government within certain limits and of allowing colleges and secondary schools conducted by private enterprise to reduce their fees, though in many details it made admirable proposals, yet by its general policy led to a general inefficiency and lowering of standard in higher education. In some matters it anticipated all that has hitherto been done. For example, in suggesting that there should be two sides in secondary schools, "one leading to the entrance examination of the Universities, the other of a more practical character, intended to fit youths for commercial and other non-literary pursuits," it still anticipates Government action by many years. The Universities Commission of 1902 proposed to make the School Final examination, a preliminary test for certain professions and posts in Government service and to substitute it for the Matriculation as a general qualification, even, if possible, as a test of fitness to enter the University. The latest statement of Government policy (dated Feb. 1913) re-asserts and emphasises these proposals, which are an attempt to enforce the suggestion of the Commission of 1882. But the general relaxation of Government control seemed to Lord Curzon the radical evil of his day.

New Senates.

Not to speak of the lowering of efficiency consequent on the lowering of fees in schools and colleges by private enterprise, we may mention among the more glaring defects which Lord Curzon had to face the mal-administration of the Universities due to the mistake of their composition. All kinds of people had crept into the Senates of Universities who from the true educational point of view had no business there. The numbers had become unwieldy so that it was impossible to get passed even necessary reforms. The progress of education was retarded and modern innovations simply ignored. As reconstituted the Universities have revised their regulations and though they have not ceased to be examining universities they have taken upon themselves the necessary function of inspecting the colleges affiliated to them. They have also received powers of becoming teaching bodies. Little has yet been done to make them that; but it may be judged from utterances in their Senates that they are becoming increasingly conscious of their possibilities or duties in this direction. In the last Resolution on Education (Feb. 1913), it was decided that the principle of an examining and affiliating University must still be maintained. Nevertheless a movement is promised in the direction of "new local teaching and residential Universities within each of the provinces in harmony with the best modern opinion as to the right road to educational efficiency." Under the present system it is no longer impossible to pass radical changes. The Senate of each University has been reduced to one hundred or less in number; and the Act lays down that in the election of members of the Syndicate, the executive body in the University, a certain number of those actively engaged in educational work should be selected. To quote from the Fifth Quinquennial Review- "the Colleges have defined rights of representation on the Syndicate, to this extent that among the elected members of the Syndicate a number not falling short by more than one of a majority must be heads or professors of colleges. One University has required by its regulations that a majority of the elected members of the Syndicate shall be heads or professors of Colleges." It is evident then that the working bodies in the Universities have been cleaned up and are now so constituted as to contain the obviously essential educational element.

Policy of 1913.

The influence of Lord Curzon on educational progress has been generally salutary. For though his reforms had the air of restriction and raised a general outcry in India—"the least that Lord Curzon was charged with was a deliberate attempt to throttle higher education in India." ("Indian Unrest" by Valentine Chirol)—it is now recognised by enlightened thinkers that all branches of education required careful review. Before any quantitative increase took place, it was necessary to reform the qualitative basis. A glance at the work done as summarised by the last Quinquennial Review will show how the machinery has been cleaned. The Universities are now respectable; secondary schools have been improved and placed under stricter conditions of recognition; attention, though insufficient, has been paid to the training of teachers; in primary schools examinations have been simplified, buildings improved, the pay of teachers raised, the courses of studies revised and widened. In these circumstances the Government Resolution of 1913 was justified in its aims to extend educational institutions on every side. It proposed to double the number of primary schools (a scheme which may be regarded as a compromise between the policy of *laissez faire* and that of compulsory education), and to encourage the establishment of a greater number of secondary schools on the lines of private enterprise by increased grants on conditions of submis-

Statement of Educational Progress in BOMBAY.

	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17.
Area in square miles	188,826	No change.	No change.	123,070	No change.	123,065
Population — Male	14,013,522			10,252,255		No change.
Population — Female	13,074,273			9,430,994		
Total Population	27,087,795			19,683,249		
Public Institutions for Males.						
Number of arts colleges	11	11	10	7	7	8
Number of high schools	129	138	141	110	111	122
Number of primary schools	11,609	12,169	12,790	9,929	9,797	9,645
Male Scholars in Public Institutions.						
In arts colleges	3,643	3,850	4,604	3,381	4,596	4,763
In high schools	41,325	45,385	47,427	37,600	37,615	40,154
In primary schools	630,427	678,031	701,496	551,987	545,461	528,294
Percentage of male scholars in public institutions to male population.	5·0	5·4	5·6	6·0	6·0	5·9
Public Institutions for Females.						
Number of arts colleges	..	..	..	..	..	..
Number of high schools	27	30	32	31	31	32
Number of primary schools	1,154	1,199	1,271	1,057	1,093	1,110
Female Scholars in Public Institutions.						
In arts colleges	76	91	93	94	106	125
In high schools	3,662	4,095	4,451	4,485	4,600	4,826
In primary schools	126,703	136,378	146,210	119,999	124,680	124,324
Percentage of female scholars in public institutions to female population.	1·0	1·1	1·2	1·3	1·4	1·4
TOTAL SCHOLARS in public institutions — Male	707,328	761,435	790,303	620,864	619,789	604,701
TOTAL SCHOLARS in public institutions — Female	134,981	145,392	156,019	129,738	134,833	134,684
TOTAL SCHOLARS in public institutions — Total	842,309	906,827	946,322	750,602	754,622	739,385
TOTAL SCHOLARS (both male and female) in all institutions.	922,877	987,685	1,029,017	789,709	799,273	780,504
Expenditure (in thousands of rupees).						
From provincial revenues	53,98	68,82	70,54	82,08	4,77	75,51
From local funds	10,76	11,62	9,63	9,34	2,17	8,87
From municipal funds	10,14	9,85	10,43	11,15	12,34	13,49
Total Expenditure from public funds	74,88	90,29	90,60	1,02,57	99,28	97,87
From fees	26,27	26,36	29,51	27,25	29,21	33,54
From other sources	35,02	36,83	39,42	24,05	25,62	24,48
GRAND TOTAL OF EXPENDITURE	1,36,17	1,53,48	1,59,53	1,53,87	1,54,11	1,55,89

sion to Government inspection, recognition, and control. One of the most interesting features of the Resolution is Government's desire to develop the hostel system. In the words of the Resolution: "The Government of India desire to see the hostel system develop until there is adequate residential accommodation attached to every college and secondary school in India." Altogether the Resolution of February 1913 ranks as a notable pronouncement, ranging as it does over every conceivable topic, from the Universities to what is often called Female Education, with a depth of insight and a readiness to face the most complex problems of finance and organisation that augurs well for educational progress. There is reason to hope that our educational system in India will stand out as one of the most remarkable achievements in the history of imperial politics.

University Organisations.

These Universities are examining bodies with colleges affiliated to them. The Governor-General is the Chancellor of the University of Calcutta and the head of the provincial Government the Chancellor of each of the other Universities. The Vice-Chancellor is nominated by each head of Government. The *executive* body is the Syndicate which is now organised so as to contain a larger educational element. Over this body the Vice-Chancellor presides, all other members being elected by the various Faculties except the Director of Public Instruction who is a member *ex officio*. The secretarial work of all university business is done by an officer appointed by the Senate, the Registrar. The legislative body is the Senate which is divided into faculties, a Faculty being a section of the Senate appointed to control the work of a particular subject. The Faculties are in most cases those of Arts; science, law, medicine and engineering. There is an Oriental Faculty in the Punjab-University alone. Each of the main branches of study in a University is represented in addition by a Board of Studies, that is, an advisory body whose duties are to look after the curricula and recommend text books or books which represent the standard of knowledge required in the various examinations. The Senate as a whole consists of from 75 to 100 members, the majority of whom are nominated by Government, the remainder being elected by the Senate or its faculties or by the body of graduates of the University.

A Commission under the Chairmanship of Dr. M. E. Sadler, Vice-Chancellor of Leeds University, is now inquiring into the affairs and future developments of Calcutta University.

UNIVERSITIES.

Constitution.—There are in India eight Universities with the following territorial limits.—

University.	Territorial Limits.	
	Province (including any Native State under its political control and any foreign possession included within its boundaries).	Native State or Colony.
Calcutta	Bengal, Burma and Assam ..	
Madras	Madras and Coorg	Hyderabad and Ceylon.
Bombay	Bombay and Sind	Baroda.
Allahabad	United Provinces of Agra and Oudh, the Central Provinces (including Berar) and Ajmer-Merwara.	The States included in the Rajputana and Central India Agencies.
Punjab	Punjab North-West Frontier Province, British Baluchistan and Delhi.	Kashmir and Baluchistan.
Mysore	.....	Mysore.
Benares †	.....	Benares.
Patna	Bihar and Orissa	.....

† The *Benares Hindu University* is denominational, and its jurisdiction is limited to Benares. The constitution and functions of the governing bodies differ from those of the other Universities. At Benares, administration is vested in a *Court* (which is the supreme body) and in a smaller *Council* (mainly elected by and from the *Court*) which is the *executive* of the *Court*; academic control is vested in a *Senate* and in an *executive Syndicate*. The *Court* appoints the *Chancellor* and the *Vice-Chancellor* through election.

Statement of Educational Progress in BENGAL.

	1911–12.	* 1912–13.	1913–14.	1914–15.	1915–16.	1916–17.
Area in square miles	No change.	78,699	No change.	No change.	No change.	No change.
Population — Male		23,365,225				
Population — Female		22,117,852				
Total Population	..	45,483,077		..	..	..
Public Institutions for Males.						
Number of arts colleges	29	31	31	31	29	30
Number of high schools	398	532	570	599	627	707
Number of primary schools	36,342	28,107	27,470	28,335	31,617	32,595
Male Scholars in Public Institutions.						
In arts colleges	9,635	12,791	14,683	15,808	17,100	18,333
In high schools	103,096	164,244	182,648	192,032	200,382	220,859
In primary schools	1,047,769	999,110	982,610	999,112	1,067,782	1,099,651
Percentage of male scholars in public institutions to male population.	4·9	6·1	6·2	6·3	6·4	6·7
Public Institutions for Females.						
Number of arts colleges	3	3	3	3	3	3
Number of high schools	19	21	26	28	26	26
Number of primary schools	3,124	6,798	7,038	7,627	8,793	9,371
Female Scholars in Public Institutions.						
In arts colleges	81	105	113	113	126	145
In high schools	2,423	3,090	3,653	3,764	3,691	3,665
In primary schools	158,616	205,784	210,137	225,130	259,640	275,240
Percentage of female scholars in public institutions to female population.	·69	1·0	1·0	1·1	1·2	1·3
TOTAL SCHOLARS in public institutions — Male	1,364,946	1,435,452	1,452,313	1,483,843	1,504,648	1,565,712
TOTAL SCHOLARS in public institutions — Female	189,971	227,313	235,434	253,124	273,850	289,800
TOTAL SCHOLARS in public institutions — Total	1,554,917	1,662,765	1,687,747	1,736,967	1,778,498	1,855,512
TOTAL SCHOLARS (both male and female) in all institutions.	1,609,360	1,718,623	1,747,608	1,799,889	1,844,541	1,918,432
Expenditure (in thousands of rupees).						
From provincial revenues	54,76	64,97	64,99	87,03	78,99	66,66
From local funds	11,64	15,88	22,23	24,34	22,79	22,26
From municipal funds	1,70	1,56	1,70	1,68	1,71	2,07
Total Expenditure from public funds	68,10	82,41	88,92	1,13,05	1,03,49	90,99
From fees	67,88	86,62	95,50	1,04,77	1,10,43	1,09,40
From other sources	36,04	33,68	36,35	36,52	42,86	42,73
GRAND TOTAL OF EXPENDITURE	1,72,02	2,02,71	2,20,77	2,54,34	2,56,78	2,43,12

* No comparison is possible with previous years, as 1912-13 is the first year of the newly constituted Presidency of Bengal.

Courses and Examinations.

The Matriculation Examination is the test for entrance to a University. After matriculation, if the student decides to graduate in Arts, he must take a four years' course. After two years he takes the Intermediate Examination. After another two years he may appear for the Examination for Bachelor of Arts. The regulations with regard to Honours vary in the different Universities. In Calcutta the honours and pass courses are separate. In Bombay the honours student takes in addition to the pass three extra papers. In Madras the honours course is taken the year after and in addition to the pass course. The degree of Master of Arts requires a further examination (except in Madras) which is taken one or two years after the examination for the B. A. degree. If the student elects to take science, his course is one of four years. In some Universities he receives the degree of B. A., in others a separate degree of B. Sc. Where the separation between Arts and Science is clearly defined, the student takes the Inter. Examination in Science two years after Matriculation, and two years after this examination appears for that of B.Sc. Those students who choose a professional course, *e.g.*, agriculture, medicine or engineering, must in most cases first attend an Arts College for one or two years before proceeding to the professional college. The student who has graduated as Bachelor at a University can graduate as a Bachelor of Law in two years.

The output of graduates during the quinquennium (1912-1917) was 27,420; 11,655 in Calcutta, 4,112 in Bombay, 5,035 in Madras, 2,684 in the Punjab and 39,34 in Allahabad. For the Master's degree during the same quinquennium, 1,816 were successful in Calcutta, 370 in Bombay, 288 in Madras, 270 in the Punjab and 358 in Allahabad.

Dacca University.

One of the most interesting features of the latest Government Resolution on education is the decision to found a teaching and residential university at Dacca. Government also profess themselves willing to sanction under certain conditions the establishment of similar universities as occasion may demand. These experiments may be regarded as an attempt to get away from the affiliating and examining type of University and to conform to that ideal of a University which requires it not only to confer degrees but to supervise the training of intellect and character as closely as possible. A University of this type will turn out graduates who may be trusted to have in their degree satisfactory credentials about their general character and ability. Under the existing system the University turns out graduates of whom it knows absolutely nothing beyond what it learns in examinations.

Colleges.

Affiliated to universities are colleges which the university concerned has the power under the Act of 1904 to inspect and to regulate. In 1917, there were 134 arts colleges in British India; and there were in these 47,135 students. The increase in the number of students during the quinquennium (1912-1917) was 58.9 per cent. All colleges, whether under Government or private management, are inspected by the universities. Under the Universities Act of 1904, the universities are empowered to make regulations in regard to the residence of students but owing to the small number of hostels it is difficult for the colleges to comply with these regulations. With the assistance of Imperial grants many new hostels have been built in Calcutta. There are, in addition to the arts college, eight medical colleges with 2,511 students, twenty-one law colleges with 5,479 students, a number of agricultural colleges of which two only (Poona and Lyallpur Colleges) are affiliated to a university, and four engineering colleges which are affiliated to a university. In the arts colleges there are 842 women on the rolls; and a very small number in the professional colleges. The Lady Hardinge Medical College for Women at Delhi, which has just been started, gives a full medical course for medical graduates.

Schools.

Government policy with regard to schools has been to provide a small number of institutions which are to be regarded as models for private enterprise. At the same time they insist on a careful inspection of all schools, whether they are run by municipalities or local boards, by private individuals or by missionary or other societies. Private enterprise is encouraged by an extensive system of grants-in-aid, which are dependent on the efficiency of the school and its expenditure on teachers and general equipment.

Secondary Schools.

There is some difficulty in the classification of schools, secondary and primary. Here the Fifth Quinquennial Review is followed as issuing from the Director General of Education. Secondary schools are divided into *English* and *Vernacular* in the first place. In the former English is a subject of instruction in the lower part and the medium of instruction in the upper part of the school. In the latter English is not taught in any way. In the second place these schools are divided into *high* and *middle* schools. In the former instruction in its highest branches leads to the standard of matriculation for a University; in the latter instruction is carried to a standard within three years of that in high schools. Thus there are four kinds of schools, English, High and Middle, and Vernacular, High and Middle. Of these the first two are often called Anglo-Vernacular as they combine instruction through the medium of the vernacular with instruction through the medium of English. But as there are so small a number of vernacular high schools that they are hardly worth including in a classification, and further as the vernacular middle schools are simply the highest stage of vernacular education and should therefore be included in the primary school system, the Review regards the distinction between English High and English Middle schools as a satisfactory classification. The distinction between these two is slight. A middle school in the words of the Review, "is nothing more than a high school with two or three top classes cut off." There are now two examinations which a boy may take at the end of his school career.—(1) The Matriculation examination, (2) the School Final.

Statement of Educational Progress in BIHAR and ORISSA.

	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.
Area in square miles	98,170	No change.	83,233	No change.	No change.
Population.. Male	18,032,708		16,859,929		
Population.. Female ..	No change.				
	18,827,328		17,630,155		
TOTAL POPULATION ..	36,860,036		34,490,084		
Public Institutions for Males.					
Number of arts colleges ..	7	7	7	7	7
Number of high schools ..	95	91	91	94	100
Number of primary schools ..	22,452	22,509	21,339	21,233	22,164
Male Scholars in Public Institutions.					
In arts colleges	1,722	2,062	2,227	2,415	2,575
In high schools	28,110	28,712	30,887	32,391	34,733
In primary schools	592,242	597,962	557,041	547,721	574,520
Percentage of male scholars in public institutions to male population	3·9	3·9	4·0	4·0	4·0
Public Institutions for Females.					
Number of arts colleges ..	....	....	....	..	....
Number of high schools ..	3	3	3	3	3
Number of primary schools ..	1,498	1,845	2,069	2,169	2,249
Female Scholars in Public Institutions.					
In arts colleges	....	....	....	..	....
In high schools	287	317	337	326	330
In primary schools	82,254	91,567	93,385	95,396	97,813
Percentage of female scholars in public institutions to female population	·51	·55	·63	·65	·62
TOTAL SCHOLARS in public institutions Male ..	704,485	712,503	678,715	674,490	688,190
TOTAL SCHOLARS in public institutions Female .	95,281	105,479	111,714	114,674	109,281
TOTAL ..	799,766	817,982	790,429	789,164	797,471
TOTAL SCHOLARS (both male and female) in all institutions...	847,244	861,535	836,209	831,430	845,025
Expenditure (in thousands of rupees).					
From provincial revenues ..	23,11	33,71	36,72	31,41	29,58
From local funds	8,24	11,29	14,13	15,57	15,73
From municipal funds	52	91	1,08	1,28	1,73
TOTAL Expenditure from public funds	31,87	45,91	51,93	48,26	47,04
From fees	18,11	20,60	21,12	22,67	22,37
From other sources	11,90	13,41	12,74	13,63	12,11
GRAND TOTAL OF EXPENDITURE	61,88	79,92	85,79	84,56	81,52

Note:—The year 1912-13 is the first year of the newly constituted province of Bihar and Orissa.

Primary Schools.

Here again there is a difficulty of classification owing to the different systems prevailing in the different provinces. However they are divided generally according to grade into lower primary and upper primary. Middle vernacular schools, classed usually among secondary schools, are really only superior primary schools and bear little relation to the systems prevailing in secondary schools. Primary schools, as the Review points out, have been defined as the education of the masses through the vernacular. If the medium of instruction be taken as the differentiation, then clearly middle vernacular schools ought to be classed as primary. In 1913-14 the number of these schools was 116,650. In the Government Resolution of Feb. 1913 is found the following statement: "It is the desire and hope of the Government of India to see in the not distant future some 91,000 primary public schools added to the 100,000 which already existed for boys and to double the 4¼ millions of pupils who now receive instruction in them."

A minor modification has been introduced in the year under review (1915-16) regarding the classification of *makbabs, tols, pathshalas,* etc. Such of them as teach all or a reasonable part of the primary course are now classed as primary schools. Formerly, they generally appeared under the head "other Schools."

Primary to Anglo-Vernacular.

The transition from Primary to Anglo-Vernacular schools, that is, from primary to secondary education, is comparable to the transition from a Board school in England to a secondary school under the authority of a Municipality or County Council. But there is a difficulty owing to the different systems prevailing in different Presidencies. Nevertheless in all provinces a boy may begin in a vernacular primary school and pass from it to a secondary school. According to the Quinquennial Review, "in Bombay all children *must* begin in the vernacular schools before proceeding to the secondary schools; in other provinces children *may* do so." (The italics are ours). "The point at which the teaching of English is begun in the secondary schools is usually the highest point in the secondary school to which children from vernacular schools can be drafted; but in the United Provinces and the Punjab there are special arrangements made to facilitate the transition from the vernacular school system to the secondary school system of children who have pursued the vernacular school course to a higher point than this." (p. 97). It may be useful to describe the actual procedure in one Presidency. In Bombay, before proceeding to an Anglo-vernacular school a boy must have passed standard IV of a primary school and a girl standard III. The curriculum of the first three standards of an Anglo-Vernacular school is very similar to that of the last three standards of a vernacular school (Standards V, VI and VII)—except that in the Anglo-Vernacular school English is added as a subject, though not used in those standards as the medium of instruction.

Rural Schools.

In the provinces of Bengal, the Punjab and the Central Provinces a distinction is drawn between *rural* and *urban* primary schools. The curriculum differs according to this distinction. In the Central Provinces the distinction was, up to the time of the publication of the last Review, one of time mainly, to allow the boys to spend half their time in agricultural work. The object of rural schools is not so much to teach agriculture as to train the minds of prospective agriculturists in an elementary way. In 1905 an attempt was made in Bombay to introduce agricultural text-books, the effect of which may only have been to destroy the faith of the boys in their father's primitive methods without having any appreciable influence on the improvement of agricultural practices. About a year ago a meeting of educational inspectors decided against this experiment. The whole question of remodelling the rural school course has been reconsidered, and in Bombay at least that and the ordinary primary course have been brought closer together. A boy who starts in a rural school can now complete the whole primary course in the same time as a boy who starts in an urban school. The idea is that boys educated in rural schools should not be put at a disadvantage. At the same time—and this is important—an attempt has been made to make rural education, however elementary, form a system of elementary education which should be complete in itself. Hence the differences between rural education and ordinary primary education are unimportant and indefinite, in Bombay at least. The last Government Resolution declares it to be "not practicable at present in most parts of India to draw any great distinction between the curricula of rural and of urban primary schools," but in the latter class of schools there is special scope for practical teaching of geography, school excursions, etc., and the nature study should vary with the environment and some other form of simple knowledge of the locality might advantageously be substituted for the study of the village map. As competent teachers become available a greater differentiation in the courses will be possible." Such differentiation has long been found a perplexing problem, and it may be doubted whether with wisdom any but indefinite differences can be introduced.

Professional and Technical Education.

Industrial institutions are to be found dotted about India, some maintained by Government, others by municipalities or local boards and others by private bodies. One of the most important institutions of this type is the Victoria Jubilee Technical Institute in Bombay. There is also the well-known Thomason College of Engineering at Roorkee, the College of Science at Poona, the Sibpur College in Bengal and the College of Engineering in Madras. There are Schools of Art in the larger towns of India, where not only architecture and the fine arts are studied but also practical crafts like pottery and iron-work. There is also a school of Forestry at Dehra Dun in the north of India. Besides these there are many medical schools and colleges which prepare students for the

Statement of Educational Progress in the UNITED PROVINCES.

—	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17.
Area in square miles	107,267	No change.	No change.	106,402	No change.	No change.
Population .. Male	24,641,831			24,469,373		
Population .. Female	22,540,213			22 36,735		
Total Population	47,182,044			46,835,108		
Public Institutions for Males.						
Number of arts colleges	32	32	35	36	35	15
Number of high schools	115	117	123	126	132	143
Number of primary schools	9,258	10,158	10,444	10,543	10,476	10,540
Male Scholars in Public Institutions.						
In arts colleges	4,602	4,869	5,286	25,784	6,195	5,130
In high schools	34,257	35,804	38,232	39,558	41,243	44,976
In primary schools	470,953	537,551	554,667	564,200	579,658	633,869
Percentage of male scholars in public institutions to male population.	2·3	2·6	2·7	2·8	2·8	3·0
Public Institutions for Females.						
Number of arts colleges	5	5	5	4	4	4
Number of high schools	20	21	22	21	22	23
Number of primary schools	957	1,008	1,067	1,084	1,064	1,089
Female Scholars in Public Institutions.						
In arts colleges	54	55	60	66	70	52
In high schools	1,804	1,984	2,187	2,080	2,227	2,340
In primary schools	41,340	42,943	46,693	47,916	48,884	51,944
Percentage of female scholars in public institutions to female population.	·21	·22	·24	·25	·27	·28
TOTAL SCHOLARS in public institutions. Male	573,194	643,900	668,707	683,121	694,986	742,134
TOTAL SCHOLARS in public institutions. Female	48,394	50,269	55,5 6	57,552	58,902	63,286
Total	621,588	694, 69	724,233	740,673	753,883	805,420
TOTAL SCHOLARS (both male and female) in all institutions.	712,000	788,298	819,472	832,454	841,324	894,886
Expenditure (in thousands of rupees).						
From provincial revenues	37,50	48,04	46,74	54,60	46,61	47,96
From local funds	26,54	26,57	30,25	32,34	37,14	38,60
From municipal funds	3,54	3,72	4,95	5,05	4,60	5,47
Total Expenditure from public funds	67,58	78,33	8,194	91,99	88, 5	92.03
From fees	20,50	23,32	25,07	27,50	28,86	31,14
From other sources	19,85	19,55	21,29	22.07	21,98	24,29
GRAND TOTAL OF EXPENDITURE	107,93	1,21,20	1,28,30	1,41,56	1,39,19	1,47,46

medical degrees of the various Universities and of which the Grant Medical College in Bombay may be taken as a good example. There are agricultural colleges, the most important of which is the Pusa Agricultural College and Research Institute, which trains experts in specialised branches of agricultural science, such as agricultural chemistry, economic botany, mycology and entomology. We may also mention the Indian Institute of Science at Bangalore, the product of generous donations by the Tata family. Two institutions mark the progress of educational interest in the Bombay Presidency, the Government Institute of Science—for whose capacious building (temporarily used as a hospital) the Government is indebted to the generosity of Sir Cowasji Jehangir, Sir Jacob Sassoon, and Sir Currimbhoy Ebrahim—and the College of Commerce, instituted to supply teaching in connection with the establishment of a Faculty of Commerce in the University.

Colleges for Teachers.

There are training colleges for secondary teachers in various parts of India, and what are called in some cases Training Colleges, in others normal schools, for the training of vernacular teachers. As there has been considerable dissatisfaction on account of the defective qualities and pay of teachers in schools, Government are now wakening to the importance of paying more careful attention to these institutions and the last Resolution provides for a better scheme of pay for teachers. In 1917, a training grant of 30 lakhs was set aside by the Government of India for the improvement of training facilities and the pay of teachers.

Education of Girls.

Hitherto little attention has been paid to this important branch of education, but during the past year the Government of India have set about making enquiries on the subject. Even in the latest Resolution nothing is definitely proposed though certain lines are laid down for guidance of enterprise in this direction. However there do exist schools and colleges for girls, while a number of the female sex are educated at institutions common to both sexes. Arts Colleges, Medical Colleges and the like admit both male and female students, and a small percentage of women attend them. In those Presidency Towns, however, where there are no colleges specially for women, it seems to be generally recognised that there ought to be, particularly when one remembers how important it is to bring the influential class of women and mothers round to some sympathy with modern thought and ideals. It may be presumed that Government will pay very limited attention to this side of education until Indians themselves demand such a move. Most Indians object to invasions on their family life and take a different attitude to women from that of Western races. Still there are schools for girls and female inspectresses employed by Government.

European Schools.

There are schools for Europeans and Eurasians in India and they are inspected by Government inspectors specially appointed for the control of European schools and for the allocation of grants to schools under their sphere of influence. The education of the domiciled communities has been found a singularly perplexing problem, and in 1912 a special conference was summoned to consider the matter. The difficulty is that they are a thing apart from the general system of education devoted to Indians proper.

Chiefs' Colleges.

There are four Chiefs' Colleges in India, *viz*:—Mayo College, Ajmer; Aitchison College, Lahore; Daly College, Indore; and Rajkumar College, Rajkot. These Colleges have been established especially to impart education to the sons of Indian Chiefs and Rulers of States, and are doing good work in that direction.

Educational Services.

These are divided into (*a*) the Indian Educational Service, (*b*) the Provincial Educational Service, (*c*) the Subordinate Educational Service.

(*a*) Indian Educational Service.— The Indian Educational Service is comprised of distinguished graduates of Universities of the United Kingdom, chiefly from Oxford and Cambridge. At the head of the Educational Department in each Presidency is the Director of Public Instruction, who is a member of the Service drawn from one of its branches and in all cases a member of the Legislative Council of his Presidency. Under him are Educational Officers in three branches, (*a*) Inspectors, (*b*) Principals and Professors of Colleges, (*c*) Headmasters of High Schools. Under the present system it is still possible for an English graduate sent out from home to start in one branch of the service and pass from one to another at the will of Government. All, with some few exceptions, start at the pay of Rs. 500 per mensem with an annual increment of Rs. 50 per mensem, and go up to Rs. 1,000 per mensem, certain Directors of Public Instruction being put on to the salary of Rs. 2,500 per mensem. A small number of personal allowances was arranged in 1896, when the service was re-organised and received its title. There are lower allowances of Rs. 200 to Rs. 250, higher allowances of Rs. 250 to Rs. 500, and an allowance of Rs. 100 after fifteen years of approved service to those who do not get any of the other allowances. Except for the Director of Public Instruction, the limit of the prospect of a member of the Indian Educational Service is Rs. 1,500 a month, the average prospects being considerably less. There is no short service pension. Schemes are on foot to improve the prospects of the service. Hitherto this service which is in reality one of the most important in the country has not been rightly estimated, though its members are as a rule men of real culture. Hence the great difficulty of recruitment. The number of posts in this service in 1917 throughout India was 255. It is clear that the Service is understaffed, if one considers the range and importance of its work. Hitherto higher educational work has been little appreciated in India, particularly by Englishmen. Now-a-days much is said of its importance, but little done for those who carry it out.

	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17.
Area in square miles	No change.	No change.	No change.	96,685	99,251	99,251
Population .. Male				10,770,707	10,770,705	10,769,704
Population .. Female				8,807,252	8,807,254	8,806,943
Total Population ..				19,577,959	19,577,959	19,576,647
Public Institutions for males.						
Number of arts colleges	11	9	9	9	9	10
Number of high schools *	101	102	111	125	130	136
Number of primary schools	3,417	3,689	4,158	4,552	4,757	4,918
Male Scholars in Public Institutions.						
In arts colleges	2,659	2,770	3,163	3,496	3,873	4,214
In high schools *	47,740	46,999	47,946	50,521	51,261	54,268
In primary schools	179,410	197,230	219,796	227,890	234,132	244,796
Percentage of male scholars in public institutions to male population.	2·5	2·7	2·9	3·1	3·2	·54
Public Institutions for Females.						
Number of arts colleges	....	....	1	1	1	1
Number of high schools	16	15	16	17	18	17
Number of primary schools	637	709	793	878	922	935
Female Scholars in Public Institutions.						
In arts colleges	....	3	13	18	20	22
In high schools	1,605	1,526	1,721	241	2,453	2,449
In primary schools	29,269	32,118	37,199	38,757	41,166	43,055
Percentage of female scholars in public institutions to female population.	·41	·44	·51	·54	·59	·62
TOTAL SCHOLARS in public institutions Male ..	279,492	298,014	326,182	338,917	350,675	366,142
TOTAL SCHOLARS in public institutions Female.	36,675	39,838	45,631	47,832	52,278	54,901
Total ..	316,167	337,852	371,813	386,749	402,953	421,043
TOTAL SCHOLARS (both male and female) in all institutions.	381,113	410,491	439,956	445,909	463,157	476,738
Expenditure (in thousands of rupees).						
From provincial revenues	22,79	29,79	28,24	34,17	35,03	31,09
From local funds	12,44	16,17	21,96	24,39	27,87	25,40
From Municipal Funds	3,53	3,96	4,57	5,26	6,00	6,43
Total Expenditure from public funds	38,76	49,92	54,77	63,82	68,90	62,92
From fees	17,75	20,67	22,22	23,82	25,39	27,36
From other sources	12,14	13,61	† 16,23	19,55	17,88	18,35
GRAND TOTAL OF EXPENDITURE ..	68,65	84,20	93,22	1,07,19	1,12,17	1,08,63

* Includes also vernacular high schools.

† Include an Imperial contribution of Rs. 2,83,742.

At the head of all Educational departments in India, at the seat of Government, is the Member for Education who sits in the Viceroy's Executive Council, and supervises the work of the Department of Education. Owing to the importance of the work carried out in this Department, there are Assistant instead of Under Secretaries.

(*b*) Provincial Educational Service.—In this service also are found principals and professors of colleges, headmasters and inspectors of schools, and, in addition, translators to Government and members engaged in other exceptional posts. This service is composed of Indians and recruited in India, the pay scheme being arranged on a much lower scale than that of the Indian Service in accordance with the qualifications and the cheaper rates of living of natives of India. The maximum pay is Rs. 700, the minimum pay Rs. 200. There is a general division between two branches, collegiate and general.

(*c*) Subordinate Educational Service.—The majority of this service are headmasters (a few), assistant deputy inspectors and all the assistant masters in Government high and middle schools. In Bengal a number of poorly paid teachers have been converted into a "lower subordinate service." The pay and prospects of this service are not good, and much complaint is made of the inferior nature of the teaching in schools run by its members. In 1907 the figures for this service stood at 6,025. The maximum pay of this service is somewhere about Rs. 400. The minimum pay used to be Rs. 30, but is now Rs. 40 per mensem.

STATISTICAL RESULTS.

The grand total of pupils in all institutions in 1917-18 was 7,534,692.

Note (*i*).—In 1914-15, it was decided to exclude figures for certain Native States, which had been previously included in the educational statistics of British India. This fact renders comparisons with past years difficult. In 1914-15, it wrought a decrease of about 4,000 institutions, a third of a million pupils and some 30 lakhs of expenditure.

Note (*ii*).—The percentages of pupils are now shown, not against 15 per cent. of the population, but against the population as a whole. (The population of school-going age was formerly reckoned at 15 per cent. of the population).

The percentage to population of pupils in all institutions (both public and private) for each of the under-mentioned years is as follows:—

Year.	Males	Females.	Total.
1911–12	4.5	·76	2·7
1912–13	4.7	·80	2·8
19 3–14	4.9	·88	2·9
1914–15	5.1	·95	3·0
1915–16	5.2	1·0	3·1
1916–17	5.31	1.03	3.22

The figures for higher institutions in 1916-17 were as follows:—

	Males.	Females.	Total.
In colleges ..	58,639	742	57,381
In secondary schools ..	1,186,335	48,435	1,234,770
In primary schools .	5,614,633	627,908	6,242,541

The number of those under training for the profession of teaching at the end of the quinquennium (1912-1917) was 19,396 who were distributed over 816 institutions. The number of trained teachers is still very inadequate, but great progress in this direction has been made in the Madras Presidency.

The number of Muhammadan pupils (at the end of the quinquennium 1912-1917) was 1,824,364.

Expenditure.

The total expenditure in 1916-17 was Rs. 11,28,83,000, of which Rs. 6,14,80,000 came from public funds. Fees amounted to 3,18,71,138. The total expenditure on education in Bengal was 243 lakhs; in Madras 216 lakhs; and in Bombay 155 lakhs. The public expenditure in Bengal amounted to 90 lakhs, in Madras to 112 lakhs, and in Bombay to 97 lakhs.

Principal developments.—In the year 1912-13, the following additional allotments from Imperial funds were announced for education in provinces and politically administered areas—319 lakhs non-recurring from the surplus revenue of that year, and 55 lakhs recurring from the revenue of the year 1913-14.

The following table shows the various Imperial grants made up to the end of 1915-16 (Indian Education in 1915-16):—

Grants of	Lakhs of rupees.	
	Recurring.	Non-recurring.
1910–11	..	93·00
1912–13	60·00	3,87·18
1913–14 .. Old ..	60·00	..
1913–14 .. New .	55·00	·95
1914–15 .. Old ..	1,15·00	..
1914–15 .. New .	9·00	12·265
1915–16 .. Old ..	1,24·00	..
1915–16 .. New .	..	..
Total ..	4,23·00	4,93·38

Statement of Educational Progress in BURMA.

	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17.
Area in square miles	230,839	No change.	No change.	No change.	No change.	No change.
Population { Male	6,183,494					
Population { Female	5,931,723					
Total Population	12,115,217					
Public Institutions for Males.						
Number of arts colleges	2	2	2	2	2	2
Number of high schools*	36	39	47	56	65	68
Number of primary schools	4,764	4,733	5,046	6,029	6,492	6,788
Male Scholars in Public Institutions.						
In arts colleges	302	336	446	565	633	645
In high schools*	10,034	10,888	14,244	15,923	17,265	17,688
In primary schools	125,552	126,877	143,422	161,021	167,563	172,547
Percentage of male scholars in public institutions to male population.	3·1	3·2	3·6	4·1	4·2	4·4
Public Institutions for Females.						
Number of arts colleges	..	..	..	..	..	..
Number of high schools	11	13	14	14	14	15
Number of primary schools	552	588	599	740	855	937
Female Scholars in Public Institutions.						
In arts colleges	22	8	7	9	12	18
In high schools	2,135	2,440	2,811	2,918	3,257	3,633
In primary schools	55,854	57,479	70,324	77,273	79,767	84,182
Percentage of female scholars in public institutions to female population.	1·3	1·4	1·6	1·8	1·9	2·0
TOTAL SCHOLARS in public institutions. { Male	194,401	202,108	227,035	252,623	263,704	273,192
TOTAL SCHOLARS in public institutions. { Female	75,909	80,325	97,050	108,531	113,301	120,207
Total	270,310	282,433	324,085	361,154	377,000	393,399
TOTAL SCHOLARS (both male and female) in all institutions.	445,255	459,593	504,928	550,500	563,154	592,523
From provincial revenues	18,98	22,31	25,72	29,70	27,05	27,68
From local funds	4,22	4,44	(*a*) 5,67	6,92	6,40	6,17
From municipal funds	3,68	3,88	(*b*) 4 47	4,67	4,78	4,50
Total Expenditure from public funds	26,88	30,63	35,86	41,29	38,23	38,35
From fees	15,09	16,53	18,49	19,80	20,32	21,00
From other sources	5,40	6,20	7,20	8,26	6,59	7,44
GRAND TOTAL OF EXPENDITURE	47,37	53,36	61,55	69,35	65,14	66,79

(*a*) Includes Rs. 72,817 being provincial contribution to District Cess Fund.
(*b*) Includes Rs. 57,772 being provincial contribution to Municipalities.

* Include also vernacular high schools.

Recent Developments.

The main developments have been described in the resolution which appeared in the *Gazette of India* published on the 22nd February 1913, which also laid down the policy of the Government of India. The year witnessed the assertion at the Imperial Durbar by command of His Most Gracious Majesty the King Emperor of the predominant claims of educational advancement, the announcement of a recurring Imperial grant of 50 lakhs for the promotion of truly popular education, and the high expression of his hopes and wishes for the expansion and improvement of education delivered by His Majesty the King-Emperor in graciously receiving an address presented by the Calcutta University. In addition to the recurring grant of 50 lakhs a recurring grant of 10 lakhs was sanctioned for university and higher education, and a non-recurring grant of 65 lakhs was also made. There has been expansion in expenditure accompanied by an increase of those under instruction.

Other features of recent years have been the collection of materials for the preparation of extensive schemes for the spread of elementary education, and, in certain provinces, for the improvement of secondary and female education; the growth of new ideas regarding university teaching, which has resulted in the proposal for a teaching and residential university at Dacca, schemes for the establishment of Universities at Nagpur and Rangoon, and the establishment of Professorships, Readerships, and Lecturerships in Universities like those of Calcutta and Bombay; the generous gifts of Sir T. N. Palit and Dr. Rash Behari Ghose to the University of Calcutta; the creation of a department of industries at Madras as a portion of the scheme of industrial training and development; the sanctioning of an industrial scheme for the Central Provinces; the institution of a college of commerce in Bombay; an inquiry carried out by Colonel Atkinson and Mr. Dawson into the question of bringing technical institutions into closer touch with the employers of labour; the institution of an Oriental Research Institute; and the conference held in July 1912 on the education of the domiciled community.

Important action has been taken in the *United Provinces* where vernacular has been made the sole medium up to the Middle standard. The school-leaving certificate has been established in *Burma*, and a scheme has been framed for *Ajmer-Merwara*, *Bombay* and the *Punjab* have made systematic arrangements for the medical inspection of pupils.

New universities have been started at Patna, Mysore and Benares. Patna is a university of the affiliating and provincial type. The elective element of its Senate is stronger than in the older provincial universities; and there is also an attempt to concentrate collegiate teaching in certain centres. Mysore University has its headquarters in Mysore, and colleges in that city and in Bangalore. Benares University is a denominational institution and makes provision for teaching in religion: and it does not affiliate colleges outside the city of Benares. It has also made a new departure by including academic councils among its governing authorities. The constitution of new universities, notably Dacca, has been delayed until the report of the Calcutta University Commission had been published.

The war has not been without its effects on education in India. The ranks of those engaged in educational work have to some extent been depleted, and great difficulty has naturally arisen in recruiting professors and inspectors from England. Financial stringency caused by the war has led to a general policy of economy. But, in spite of all these adverse circumstances, general progress has not been impeded. The figures of increase, given elsewhere, are not unsatisfactory. It may, however, be said that the general expansion of education, though far from checked, has been to a certain extent retarded.

Statement of Educational Progress in ASSAM.

	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.
Area in square miles	61,471	No change.	53,015	No change.	No change.
Population .. Male	3,638,287		3,467,621		
Population .. Female ..	3,421,570		3,246,014		
TOTAL POPULATION ..	7,059,857		6,713,635		
Public Institutions for Males.					
Number of arts colleges ..	2	2	2	2	2
Number of high schools ..	27	29	30	32	36
Number of primary schools ..	3,534	3,760	3,926	3,859	3,868
Male Scholars in Public Institutions.					
In arts colleges	360	441	550	592	687
In high schools	9,985	11,186	12,223	12,182	13,542
In primary schools	138,236	150,584	162,291	161,612	157,046
Percentage of male scholars in public Institutions to male population	4·6	5·1	5·7	5·7	5·7
Public Institutions for Females.					
Number of arts colleges ..	....	....	....	..	....
Number of high schools ..	2	2	2	2	2
Number of primary schools ..	256	300	345	333	329
Female Scholars in Public Institutions.					
In arts colleges	....	1	1	1	1
In high schools	352	411	434	418	428
In primary schools	17,845	20,932	24,587	24,730	24,762
Percentage of female scholars in public institutions to female population	·55	·66	·82	·84	·85
TOTAL SCHOLARS in public institutions Male ..	168,364	185,386	199,891	199,524	197,096
TOTAL SCHOLARS in public institutions Female .	19,085	22,747	26,761	27,321	27,723
TOTAL ..	187,449	208,133	226,652	226,845	224,819
TOTAL SCHOLARS (both male and female) in all institutions	194,288	215,141	233,883	237,485	233,913
Expenditure (in thousands of rupees).					
From provincial revenues ..	7,71	10,76	12,33	12,28	9,97
From local funds	5,82	6,25	7,81	7,26	7,33
From municipal funds	16	33	44	43	3
TOTAL Expenditure from public funds	13,69	17,34	20,58	19,97	17,63
From fees	3,02	3,50	3,75	4,39	4,65
From other sources	2,33	2,44	2,21	2,52	3,31
GRAND TOTAL OF EXPENDITURE	19,04	23,28	26,54	26,88	25,59

Note:—The year 1912-13 is the first year of the newly constituted province of Assam after the re-distribution.

Statement of Educational Progress in CENTRAL PROVINCES and BERAR.

	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17.
Area in square miles	117,935	No change.	No change.	99,823	No change.	No change.
Population { Male	7,766,007			6,930,392		
Population { Female	7,833,993			6,985,916		
Total Population	15,600,000			13,916,308		
Public Institutions for Males.						
Number of arts colleges	4	4	4	4	4	4
Number of high schools *	35	39	40	42	43	43
Number of primary schools	3,195	3,471	3,846	3,727	3,699	3,698
Male Scholars in Public Institutions.						
In arts colleges	608	705	860	1,013	1,081	1,093
In high schools *	3,102	3,547	3,624	4,069	4,630	4,924
In primary schools	228,255	248,439	274,664	257,980	256,187	253,950
Percentage of male scholars in public institutions to male population.	3·6	3·8	4·2	4·5	4·5	4·5
Public Institutions for Females.						
Number of arts colleges	..	..	..	..	..	..
Number of high schools	5	7	7	7	7	7
Number of primary schools	309	322	320	318	323	316
Female Scholars in Public Institutions.						
In arts colleges	..	..	..	1	..	1
In high schools	28	51	43	46	59	58
In primary schools	27,948	30,339	33,051	31,533	32,504	33,516
Percentage of female scholars in public institutions to female population.	·39	·42	·46	·49	·51	·53
TOTAL SCHOLARS in public institutions. { Male	282,257	302,077	328,844	312,755	312,308	312,322
TOTAL SCHOLARS in public institutions. { Female	30,729	32,854	35,960	34,388	35,394	36,739
Total	312,986	334,931	364,804	347,143	347,702	349,061
TOTAL SCHOLARS (both male and female) in all institutions.	313,205	335,248	365,128	347,666	350,381	351,165
Expenditure (in thousands of rupees).						
From provincial revenues	10,64	11,87	13,82	14,03	15,28	15,96
From local funds	12,08	13,88	14,15	15,42	17,56	16,54
From municipal funds	2,93	3,70	3,53	4,27	5,37	5,58
Total Expenditure from public funds	25,61	29,45	31,50	33,72	38,21	38,08
From fees	2,84	3,67	3,91	4,72	5,39	5,73
From other sources	4,16	4,76	5,89	5,61	4,25	5,15
GRAND TOTAL OF EXPENDITURE	32,65	37,88	41,30	44,05	47,85	48,96

* Anglo-Vernacular high schools.

Statement of Educational Progress in the NORTH-WEST FRONTIER PROVINCE.

	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17.
Area in square miles	No change.	No change.	No change.	No change.	No change.	No change.
Population .. .. { Male						
Female						
Total Population ..						
Public Institutions for Males.						
Number of arts colleges	1	1	2	2	2	2
Number of high schools	12	12	14	14	16	17
Number of primary schools	260	335	440	539	584	585
Male Scholars in Public Institutions.						
In arts colleges	38	37	77	148	146	177
In high schools	5,146	5,438	4,997	4,905	5,418	5 469
In primary schools	14,129	16,899	22,327	25,601	26.328	25,069
Percentage of male scholars in public institutions to male population.	1·9	2·3	2·8	3·1	3·2	3·2
Public Institutions for Females.						
Number of arts colleges	..	..	..	..	..	..
Number of high schools	..	..	..	..	..	..
Number of primary schools	28	29	30	38	40	42
Female Scholars in Public Institutions.						
In arts colleges	..	..	..	..	..	..
In high schools	..	..	..	..	..	..
In primary schools	1,925	2,044	2,239	2,850	2,918	2,521
Percentage of female scholars in public institutions to female population.	·22	·24	·25	·32	·34	·3
TOTAL SCHOLARS in public institutions. { Male ..	23,236	27,344	33,124	37,151	38,778	37,946
{ Female .	2,247	2,396	2,619	3,280	3,509	3,287
Total	25,483	29,740	35,743	40,431	42,287	41,233
TOTAL SCHOLARS (both male and female) in all institutions.	34,911	38,472	44,445	47,744	49,512	46,285
Expenditure (in thousands of rupees).						
From provincial revenues	99	† 3,68	3,10	2,80	2,86	2,89
From local funds	1,42	† 3,96	2,11	2,39	2,72	2,82
From municipal funds	68	† 1,76	65	84	69	1,99
Total Expenditure from public funds	3,09	8,50	(*a*) 5,86	6,03	6,27	7,70
From fees	56	65	82	93	1,04	1,14
From other sources	63	47	3,58	2,69	2,12	1,47
GRAND TOTAL OF EXPENDITURE ..	4,28	9,62	10,26	9,65	9,43	10,31

* Imperial Revenues.

† Including Rs. 2,60, 1,60 and 1,04 in thousands respectively from Imperial grants.

(*a*) Including Rs. 2,44 (in thousands) from Imperial grants.

Statement of Educational Progress in COORG.

	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17.
Area in square miles	1,582	No change.	No change.	No change.	No change.	No change.
Population .. Male	97,279					
Population .. Female	77,697					
TOTAL POPULATION	174,976					
Public Institutions for Males.						
Number of arts colleges	....	....	....	....	....	....
Number of high schools	1	1	1	1	1	2
Number of primary schools	80	84	93	94	91	92
Male Scholars in Public Institutions.						
In arts colleges	....	....	....	....	....	....
In high schools	206	201	226	249	290	529
In primary schools	3,970	4,523	4,965	5,118	4,797	4,919
Percentage of male scholars in public institutions to male population.	4·4	5·0	5·5	5·7	5·4	5·6
Public Institutions for Females.						
Number of arts colleges	....	....	....	....	....	....
Number of high schools	....	....	....	....	....	....
Number of primary schools	6	6	6	7	7	7
Female Scholars in Public Institutions.						
In arts colleges	....	....	....	....	....	....
In high schools	1	1	....	....	....	....
In primary schools	1,773	1,943	2,184	2,247	2,259	2,164
Percentage of female scholars in public institutions to female population.	2·4	2·6	2·9	3·0	3·0	2·9
TOTAL SCHOLARS in public institutions. Male ..	4,342	4,909	5,390	5,577	5,314	5,478
TOTAL SCHOLARS in public institutions. Female	1,681	2,033	2,294	2,360	2,365	2,267
TOTAL SCHOLARS in public institutions. Total ..	6,203	6,942	7,684	7,937	7,679	7,745
TOTAL SCHOLARS (both male and female) in all institutions.	6,811	7,545	8,039	8,301	7,985	7,978
Expenditure (in thousands of rupees).						
From provincial revenues	39	75	53	63	63	60
From local funds	13	13	17	18	17	13
From municipal funds	2	2	2	2	7	2
Total Expenditure from public funds	54	90	72	83	87	75
From fees	13	13	14	16	16	17
From other sources	6	7	5	5	7	9
GRAND TOTAL OF EXPENDITURE	73	110	91	104	1,10	101

Statement of Educational Progress in DELHI.

	1912-13.	1913-14.	1914-15.	1915-16.	1916-17
Area in square miles	528	No change.	No change.	574½	573
Population .. Male	221,360			229,342	230,345
Population .. Female	175,637			182,207	182,476
TOTAL POPULATION ..	396,997			411,549	412,821
Public Institutions for Males.					
Number of arts colleges	2	2	2	2	2
Number of high schools	6	6	6	6	7
Number of primary schools	69	76	82	87	96
Male Scholars in Public Institutions.					
In arts colleges	219	236	289	309	364
In high schools	1,830	1,780	1,915	2,011	2,004
In primary schools	3,907	4,877	5,181	5,365	6,064
Percentage of male scholars in public institutions to female population ..	3·0	3·4	3·7	3·8	4·1
Public Institutions for Females.					
Number of arts colleges	....	....	....	....	....
Number of high schools	2	....	....	....	....
Number of primary schools	9	10	10	13	14
Female Scholars in Public Institutions.					
In arts colleges	....	....	....	....	....
In high schools	155	....	....	....	....
In primary schools	461	516	543	701	588
Percentage of female scholars in public institutions to female population ..	·54	·66	·99	1·0	1·0
TOTAL SCHOLARS in public institutions .. .. Male ..	6,634	7,580	8,250	8,640	9,537
TOTAL SCHOLARS in public institutions .. .. Female .	944	1,156	1,751	1,980	2,003
TOTAL ..	7,578	8,736	10,001	10,620	11,540
TOTAL SCHOLARS (both male and female in all institutions)	11,275	12,933	13,200	14,085	14,505
Expenditure (in thousands of Rupees).					
From provincial revenues	1,22	69	1,92	1,44	2,20
From local funds	9	27	33*	42	64
From Municipal funds	14	47	55†	50	52
TOTAL EXPENDITURE from public funds.	1,45	1,43	2,80	2,36	3,36
From fees	41	83	91	95	1,13
From other sources	41	97	1,08	1,24	9,84
GRAND TOTAL OF EXPENDITURE ..	3,27	2,23	4,79	4,55	12,33

* Includes Provincial contribution of Rs. 12,576.
† Includes Provincial contribution of Rs. 9,763.

The Mahomedan University.

The movement in favour of transforming the Mahomedan Anglo-Oriental College at Aligarh into a teaching and residential University was started as early as the end of last century. It was hoped that the foundation of such an institution would awaken among Mahomedans the memory of their old seats of learning and prove an incentive to them in the future to regain the intellectual eminence from which they seem to have fallen of late years. Some time ago it was observed in a government report that the backwardness in education on the part of Mahomedans was due partly to poverty, partly to indifference and partly to their educational wants not being the same as those of the remainder of the population amongst whom they live. In this year's report, however, it is stated that a remarkable awakening on the part of Mahomedans in this direction has been witnessed during the last decade, when the total number of pupils under instruction in all classes of institutions rose by nearly 60 per cent. On the other hand in the matter of higher education their numbers remain well below that proportion notwithstanding the large relative increase. It was the aim of Sir Syed Ahmed Khan, K.C.S.I., years ago to place the benefits of a liberal education within the reach of the Mahomedan community and in 1875 a school was opened which three years later was converted into the Aligarh College. Under the inspiring influence of Mr. Beck and of Mr. (now Sir) Theodore Morison great strides have been made. The college is now affiliated to the Allahabad University for the First Arts and B.A. for the B. Sc. in mathematics, chemistry and physics, for the M. Sc. in mathematics and chemistry and D. Sc. in mathematics; and for the M. A. in English, Arabic, Persian, Sanskrit, History, Philosophy, Political Economy and Mathematics. The students of the college are also instructed in the theology and faith of Islam.

State of the Project.—His Highness the Aga Khan, the foremost Indian Mahomedan, had for some time been waiting until the time was ripe to make an appeal for funds for the University, which he had constantly held before his co-religionists as the educational goal towards which they should strive. He conceived that the moment had arrived in 1911, when His Majesty the King Emperor visited India to announce in person his coronation to his Indian people. As the result of a spirited appeal, followed by a very active personal canvas, His Highness was able to secure promises aggregating some thirty lakhs of rupees. A draft constitution was drawn up and a consultative committee was formed. But the draft constitution was not approved by the Secretary of State, and on the question of the right of affiliating in particular there was a sharp difference of opinion. Government laid down, as in the case of the proposed Hindu University, that the new university should not have the power of affiliating Moslem institutions in other parts of India. Thereafter the project lapsed.

In 1915, when the Hindu University movement crystallised in the Hindu University Act further steps were taken to come to an agreement with the Government of India. The Government however laid down at once that the principles governing the constitution of the Hindu University would be applied to all other institutions of a like character, and that they were not prepared to consider any proposals, or to receive any deputation, which did not accept this governing rule. On October 15th, 1915, a meeting of the Moslem University Association was held at Aligarh, under the presidency of the Raja of Mahmudabad, when it was proposed that the meeting recommends to the Moslem University Foundation Committee the acceptance of the Moslem University on the lines of the Hindu University. The resolution was declared to have been carried, but this was subsequently disputed and an official report of the proceedings was issued. It is evident that whatever transpired at the Aligarh meeting a large number of Indian Moslems are not prepared to accept a constitution for their University similar to that of the Hindu University, and that there is no prospect of agreement. Nor is there the slightest prospect of the Government of India agreeing to any markedly different constitution. The prospects of the University materialising are therefore exceedingly remote; it is a curious sequel that the Hindu University, which was a poor second in the field, should have received its Act and be proceeding with the necessary buildings whilst the Moslem University, started long before, should be indefinitely held up. It has been proposed that the interest on the funds subscribed should be devoted to other educational objects, such as scholarships, but this is opposed by some of the subscribers who maintain that they subscribed to a University, and if the funds are not to be devoted to this purpose they should be returned to the donors.

Alteration of Plans.—In April, 1917, at a meeting of the Foundation Committee the following resolution was passed:—

"That this meeting of the Moslem University Foundation Committee hereby resolves with reference to the letter of the Government of India Education Department, dated Delhi 17th February 1917, D. O. No. 66, that the Committee is prepared to accept the best University on the lines of the Hindu University. It further authorises the Regulation Committee appointed at its Lucknow meeting, with the President and Honorary Secretary of the Moslem University Association as its ex-officio members to take necessary steps in consultation with the Hon. the Education Member for the introduction of the Moslem University Bill in the Imperial Legislative Council."

Patna University.

As soon as the new province of Bihar and Orissa was constituted in 1912 it was recognised that in order to make it a self-contained province it was necessary to furnish it with two institutions in particular, *viz.*, a High Court and a University. The High Court was first established. A Committee consisting of 17 members was appointed in May 1913, to draft a scheme for a University. It made its report in March 1914. The report was published and after considering the criticism on the proposals the Local Government submitted their revised scheme to the Government of India in May 1915. This scheme was revised by the Government of India, was sent in October 1915 to the Secretary of State for India who gave it his sanction. The Hon. Sir Sankaran Nair, the Educational Member of the Government of India, introduced this Bill in the Imperial Legislative Council on the 27th September 1916.

The provisions of the Bill were strongly criticised in the pubic press and in the Legislative Council. Those which evoked the widest opposition related to the restrictions placed in the creation of new colleges, the powers vested in the Chancellor and the Local Government, and the conferring of independent powers on the Syndicate, without reference to the Senate of the proposed University. The Bill was referred to a Select Committee on the understanding that it would be reconsidered in the light of these criticisms. The Select Committee submitted a unanimous report recommending drastic changes in the draft measure. The Bill, as revised by the Committee, was published for the information of the public. The Educational Member of the Government of India moved at the meeting of the Imperial Legislative Council, held on the 12th September 1917, that the Select Committee's report be taken into consideration. There was a debate on that and the next day on the Bill, at the end of which Sir Sankaran Nair moved that the Bill to establish and incorporate a University at Patna, as amended, be passed. He observed that the Bill did not satisfy the extreme advocates of efficiency or those who thought that more representatives of popular opinion and sentiment have not obtained full control. That, he added, was perhaps in itself a recommendation. The motion was put and agreed to. The Act received the assent of the Governor-General on the 18th September 1917.

The body corporate of the Patna University consists of the Chancellor, the Vice-Chancellor, and the Senate. The Lieutenant-Governor of Bihar and Orissa for the time being is the Chancellor, and has, by virtue of his office, the right of presiding at Convocations of the University, of confirming proposals for the conferment of honorary degrees, of finally deciding any dispute with regard to the election of members of the Senate and the Syndicate and of inspecting the University and of visiting and inspecting the Colleges, both generally and for the purpose of seeing that the proceedings of the University are in conformity with the Act and the Regulations. He may, by order in writing, annul any such proceeding which is not in conformity with the Act and the Regulations, provided that, before making any such order, he shall call upon the University to show cause why such an order should not be made, and if any cause is shown within a reasonable time he shall consider the same.

The Vice-Chancellor is to be appointed by the Local Government for a term of three years. He will be eligible for re-appointment from time to time, provided no such re-appointment is far more than two years. Besides presiding at meetings of the Senate and the Syndicate, he is empowered to appoint officers and servants whose aggregate emoluments do not exceed two hundred rupees a month: and also to visit and inspect colleges.

The Senate is to consist of not less than sixty and not more than seventy-five ordinary Fellows. The following *ex-officio* fellows are not included in this number: the Vice-Chancellor, the members of the Executive Council of the Lieutenant-Governor, the Bishop of Chota Nagpur, the Director of Public Instruction, and the Principals of all Colleges in which instruction to a degree standard is given. The members of the first Senate are named in the first schedule to the Act, but in the next and succeeding Senates fifty ordinary Fellows will be elected by the teaching staffs of the affiliated colleges, by graduate teachers of registered schools, by registered graduates, and by specified associations or public bodies. The Senate is the supreme governing body of the University. The Syndicate is to consist of fourteen members. Special provision is made for the representation of Orissa both in the Senate and the Syndicate.

The Colleges affiliated to the University are of two kinds: Colleges of the University, whose buildings are situated within a specified area, and External Colleges, whose buildings are situated in one of the four following towns: Muzaffarpur, Bhagalpur, Cuttack, Hazaribagh. It is provided that this condition may be dispensed with in any particular case with the sanction of the Government of India.

The features of the Patna University which differentiate it from the five older non-denominational universities are: the powers of the Chancellor which are on the lines of those of the Chancellor of the Benares Hindu University, the composition of the Senate which is predominantly elective, and the combination of the characters of a residential and an affiliating University.

Mysore University.

The Mysore University was constituted under Regulation V of 1916, for the better encouragement and organisation of education in the State. His Highness the Maharaja is the Chancellor of the University. During the year 1916-17 it comprised two constituent colleges, *viz.*, the Maharaja's College at Mysore, the Head-quarters of the University, and the Central College at Bangalore.

The Council is the executive body of the University and consisted of 10 members. The Senate consisted of 58 Fellows. The two faculties of Arts and Sciences were constituted and their Deans elected.

The year 1916-17 being a period of transition, provision was made for such of the classes of the Madras University as were found necessary, work under the Mysore University beginning with the second year class. As a transitory arrangement, passed intermediate candidates of the Madras University were admitted to the second year B. A. class. The total numbers on the rolls were 275 in the Maharaja's College and 313 in the Central College, the number of students in the second year B. A. class in them being 40 and 37 respectively.

Eleven endowments of the aggregate value of Rs. 79,638 were offered to the University and accepted. Of this amount Rs. 30,376 was contributed by Mr. Navinam Ramanujacharya, and Rs. 20,000 by Lady Kaveri Bai Krishnamurti.

The income of the University from all sources amounted to Rs. 8,66,648 and the expenditure to Rs. 3,84,450. Of the total receipts, a sum of Rs. 8,06,000 was received as grants from Government, Rs. 37,300 as grants from private persons, Rs. 1,845 as examination fees, Rs. 20,433 fees from Colleges, Rs. 394 fees for the registration of graduates and the rest was made up by other receipts.

Other important items of work done by the University during the year were the framing of courses of studies for the B. Sc., B. E., B. Com., and M.A., degree examination; working out details for the institutions of B. E., B. Com., B. T. and medical courses; framing rules of business of the Council and the Senate; framing ordinances for regulating the election of Fellows; gauging the requirements of the two colleges for the next 5 years; framing a scheme for the activities of the publication bureau and the Extension Lectures Board; publication of a booklet regarding the courses of studies and text-books and of the 1st number of the University Magazines; and preparation of a handbook to the University. Towards the end of the year Government sanctioned the institution of the faculties of Engineering and Commerce in the University so also the opening of the B.Sc. classes in the Central College from the new academical year. The construction of University buildings at Mysore made good progress during the year.

Burma University.

During his visit to Rangoon in December 1916, H. E. the Viceroy said that proposals for a Burma University had long been under consideration and he hoped that a final settlement would soon be reached enabling the Province to realise its cherished aspiration.

Correspondence relating to the scheme and a **draft Bill** for the University was published in April, 1916, together with an explanatory note by Mr. J. G. Covernton, Director of Public Instruction. Mr. Covernton says that the draft bill of 1913-14 has been entirely recast on the lines of the Hindu University Bill. While the complicated constitutional machinery of the Hindu University has not been adopted the principles of arrangement governing its Bill have been followed. Thus the Bill itself, contains definitions and a statement of the various authorities and Officers of the University and of their functions, general provisions, regarding incorporation, tenure of property, administration of funds, admission of institutions, award of degrees and diplomas and clauses conferring emergency powers on Government and enabling the authorities stated to frame, amend or repeal statues or regulations.

Modified plans.—A letter, dated the 2nd March from the Hon. Mr. C. M. Webb, I.C.S., Secretary to the Government of Burma to the President of the Educational Syndicate, Burma states: If it is considered essential that a university should be started on the scale originally contemplated it will be necessary to postpone its constitution until the requisite funds are available, but it is financially possible to commence a university at an early date on a modified scale, utilising the colleges which have already attained university standing and, with the addition of a central executive staff t proceed to create a small university on th lines suitable to the immediate requirement of the province. The Lieutenant Governo considers that a university on the modifie scale suggested is not at all worthy of the pr vince of Burma. It is, however, the on alternative to a postponement of the schen for a period which cannot at present be estimate

Practical Studies.—On this practic ground His Honour is prepared to accept it the Educational Syndicate approve of it as temporary measure. It should be recognis that there is an unique opportunity in Burn of starting a university on new lines free fro many of the traditions which have hamper university development in other Indian pr vinces. His Honour is disposed to think, general grounds and with some reference the needs of the province, that the Rango University may usefully be of more practi type than any yet attempted in India wi the control and direction of full Universi course in arts and science, pure and applie technology, medicine, engineering, agricultu law, forestry, veterinary science and trainin commerce and arts and architecture. It m perhaps combine with University instructi practical studies at the Chief Court, the Paste Institute and the hospitals and also at t Museum which the local Government is co mitted to build as soon as funds are availab It is possible in Burma to a greater exte than in any of the older and more advanc provinces in India to concentrate the intellect energies of the province in one immedi neighbourhood and to develop a really ma sided university.

Dacca University.

With the modification of the Partition of Bengal announced by His Majesty the King Emperor at the Coronation Durbar at Delhi in December 1911, Dacca ceased to be the capital of the separate province of East Bengal. Nevertheless, it was decided that the interests of higher education in that part of the new Bengal Presidency demanded the creation of a separate University. His Majesty, in replying to the address of the Calcutta University on the 6th January 1912 had declared that it was his wish that there might spread over the land a network of schools and colleges, from which would go forth loyal and manly and useful citizens, able to hold their own in industries and agriculture and all the vocations in life. The proposal of a new University at Dacca was one of the first fruits of this Imperial declaration. The Government of India conveyed their decision to establish a University at Dacca in their letter to the Government of Bengal, dated the 4th April 1912, and the latter Government, by their Resolution, dated a month later, appointed a Committee to frame a scheme for the new University. The Committee was instructed therein that the proposed University should be of the teaching and residential and not of the federal type, and that it should be a self-contained organism unconnected with any colleges outside the limits of the City of Dacca.

The Committee consisted of Mr. R. Nathan, C.I.E., Chairman, Mr. Kuehler, Director of Public Instruction, Bengal, Dr. Rash Behari Ghose, Nawab Sayid Nawab Ali Chaudhuri, Nawab Faraj-ul-Islam, Babu Ananda Chandra Roy, Mr. Mahomed Ali, Principal H. R. James, Principal W. A. J. Archbold, Mahamahopadhyaya Satis Chandra Acharji, Babu Lalit Mohun Chatterji, Professor C. W. Peake, Shams-ul-Ulama Abu Nasr Muhammad Waheed, and Mr. J. S. Fraser, as Secretary. The Committee made their report at the end of the year. They submitted a complete scheme with a financial estimate sufficiently detailed to enable the proposals to be laid before the Secretary of State. They proposed that the Dacca University should include the following departments:—Arts Science, Islamic Studies, Law, Engineering, Medicine and Teaching. The department of **Islamic Studies** was intended to be a distinctive feature of the new University, which, it was believed, would be greatly appreciated by the Mahomedan community of Bengal. The University, it was proposed, should consist of six Arts Colleges, namely, the existing Dacca and Jagannath Colleges and in addition, a New Arts College, A Mahomedan College, a Women's College, and a College for the well-to-do classes; an Engineering College; a Teachers' College; a Law Department; a Department of Medical Studies; and Post-graduate courses in Arts and Science. All Mahomedan students in residence would, it was proposed, join the Mahomedan College, but it would be open to a Mahomedan student who lived with his parents or guardians to enter any college on the same terms as other non-resident students. The inclusion of a **Women's College** in the scheme was justified on the ground that female education in Bengal was developing in so promising a manner that women students might fairly claim to share in the benefits of the new residential University. Before leaving the subject of Arts Colleges, reference should be made to the special provision which was made in the scheme for **Physical Education and training.** Every student was to receive individual care and physical training appropriate to his needs and constitution, and at the same time, every encouragement was to be given to outdoor games and sports, and to the healthy rivalry of intercollegiate and University competitions. The social life of the proposed University was also provided for. The College for the well-to-do classes was intended to attract young men of the land-owning and wealthy classes whom the ordinary colleges, it was thought, would not, attract. A word of explanation is necessary as regards the medical and law departments proposed for the University. The idea underlying them was that the local conditions were not sufficiently developed for the immediate establishment of a Medical College and a Law College, and that, for some years to come the University should content itself with preparing students for the Medical and Law Degree examinations of the Calcutta University. The total cost of the full scheme was estimated at 53 lakhs of rupees, but deducting certain sums which were available from other sources the net cost was put down at nearly 40 lakhs, exclusive of recurring charges. These were expected to involve a net total of about 6½ lakhs annually.

Before the scheme thus elaborated by Mr. Nathan's Committee could be taken in hand, the war broke out. The possibility of giving effect to the full scheme had to be abandoned but in reply to a question from the Hon. Mr. Ambika Charan Mozumdar, the Government of Bengal stated at a recent meeting of the Bengal Legislative Council that a **modified scheme** costing 38 lakhs, capital and recurring charges included, as against 59 lakhs of the original scheme, would be taken in hand. The modified scheme will merely be the preliminary to carrying out the larger scheme. The following institutions will form the nucleus of the University; The Dacca College, the Jagannath College, the Mahomedans College, the Women's College, the Teachers' College, the Law Department, Department of Medical studies and Department of Islamic studies. Other institutions such as a new college, an Engineering College and a Department of Sanskritic studies which are included in the complete scheme have had to be omitted owing to the financial position. The construction of the building for the Mahomedan College will be postponed until funds are available for the inauguration of the larger scheme and it will be accommodated for the present in the old Secretariat Building. Zoological, physiological and anatomical laboratories have also been omitted for the present but it is hoped to find temporary accommodation for them pending the construction of separate buildings.

Domestic Servants.

The relationship of master to servant in India is a subject to which attention is frequently directed in the Press by complaints about the alleged deterioration of domestic servants and the hardships to which employers are subjected by the boycotting action of discharged servants. The remedy most commonly propounded for misbehaviour on the part of servants is registration with a view to checking the use of false testimonials, or "chits," and to enabling masters to obtain certain information as to the character of the persons they employ. This mode of procedure is of German origin, for the old Prussian Servants' Ordinances (Gesindeordnung) were supplemented in 1854 by a law, applying only to agricultural labourers and domestic servants, which punishes breach of contract, and since then various State laws dealing with domestic servants have been passed in Germany. The conditions are not, however, analogous for the servant keeping class in India is proportionately larger than in Europe, as also is the number of servants kept by each individual.

The first attempt in the East to deal with the problem by legislation was made in **Ceylon.** The act dealing with the registration of domestic servants in that Colony is comprised in Ordinance No. 28 of 1871. It extends to all classes of domestic servants, hired by the month or receiving monthly wages, and the word 'servant' means and includes head and under-servants, female servants, cooks, coachman, horsekeepers and house and garden coolies. The Act came into operation in 1871 and empowered the Governor to appoint for the whole of the Island or for any town or district, to which the Ordinance is made applicable, a registrar of domestic servants, who is to be under the general supervision and control of the Inspector-General of Police. A registry is kept by the registrar of all domestic servants employed within his town or district, and he has to enter therein the names of all the servants, the capacities in which they are employed at the time of such registration, the dates of their several engagements and such memorandum of their previous services or antecedents as they may desire to have recorded in the register. But the registrar must, previous to his entering all these details, satisfy himself as to the credibility of the statements made to him. Any person, who may not have been a domestic servant before, but who is desirous of entering domestic service, has to submit an application to the registrar, and if the registrar is satisfied that there are reasonable grounds to believe that the applicant is a fit and proper person to enter domestic service he shall enter his name in the register, recording what he has been able to learn respecting the person's antecedents together with the names of any persons who are willing to certify as to his respectability. If the applicant is unable to produce satisfactory or sufficient evidence as to his fitness for domestic service the registrar may grant him "provisional" registration, to be thereafter converted into "confirmed" registration according to the result of his subsequent service. If the registrar is satisfied that the applicant is not a fit and proper person he should withhold registration altogether but in such a case he must report his refusal to register to the Inspector-General of Police.

Every person whose name has been registered in the general registry is given a pocket register containing the full particulars of the record made in the general registry. No person can engage a servant who fails to produce his pocket register or whose pocket register does not record the termination of his last previous service, if any. On engaging a servant the master has to enter forthwith in the pocket register the date and capacity in which such servant is engaged and cause the servant to attend personally at the registrar's office to have such entry inserted in the general registry. Similarly, in case the master discharges a servant he must insert in the pocket register the date and cause of his discharge and the character of the servant: Provided that if for any reason he be unwilling to give the servant a character or to state the cause of his discharge he may decline to do so. But in such a case he must furnish to the registrar in writing his reasons for so refusing. If the servant on dismissal fails to produce his pocket register the master must notify that fact to the registrar. Whenever any fresh entry is made in the pocket register the servant is bound to attend the registrar's office to have such an entry recorded in the general registry. Every servant whose name is registered shall if he subsequently enters service in any place not under the operation of the Ordinance, attend personally at the nearest police station on his entering or leaving such service and produce his pocket register to the principal officer of police at such station in order to enable the police officer to record the commencement or termination of the service. The police officer has then to communicate it to the registrar of the town or district in which such servant was originally registered.

Various **penalties of fine** as well as of imprisonment are imposed for violation of any of the acts required to be done or duties imposed by the Act on the various persons mentioned below. As respects masters if they fail to fulfil any of the duties imposed on them by the Act they expose themselves to a liability of the being fined to the extent of Rs. 20. Similarly a servant, who fails to fulfil any of the duties imposed on him by the Act is liable to pay a fine not exceeding Rs. 20. But in case he gives any false information to the registrar or to any other person on matters in which he is required by this Ordinance to give information he is liable to a fine not exceeding Rs. 50 or to imprisonment, with or without hard labour, not exceeding 3 months. A fee of 25 cents. is charged to the master on engaging a new servant a like fee of 25 cents. is charged to the servant on his provisional registration, or on registration being confirmed, or for registration of previous service or antecedents. But in case of loss or destruction of the pocket register the servant has to pay one rupee for the issue of a duplicate pocket register.

A similar Ordinance (No. 17 of 1914) has been introduced in the **Straits Settlements,** where its operation has been limited to such local areas as may be declared by the Governor in Council and its application within such areas has been restricted to the class of householders who are expected to desire the benefit of its provisions

Local Self-Government.

Throughout the greater part of India, the village constitutes the primary territorial unit of Government organisation, and from the villages are built up the larger administrative entities—tahsils, sub-divisions, and districts.

"The typical Indian village has its central residential site, with an open space for a pond and a cattle stand. Stretching around this nucleus lie the village lands, consisting of a cultivated area and (very often) grounds for grazing and wood-cutting.... The inhabitants of such a village pass their life in the midst of these simple surroundings, welded together in a little community with its own organisation and government, which differ in character in the various types of villages, its body of detailed customary rules and its little staff of functionaries, artisans and traders. It should be noted, however, that in certain portions of India, *e.g.*, in the greater part of Assam, in Eastern Bengal, and on the west coast of the Madras Presidency, the village as here described does not exist, the people living in small collections of houses or in separate homesteads".—(*Gazetteer of India.*)

The villages above described fall under two main classes, *viz.*—

Types of Villages.—"(1) The 'severalty' or raiyatwari village, which is the prevalent form outside Northern India. Here the revenue is assessed on individual cultivators. There is no joint responsibility among the villagers, though some of the non-cultivated lands may be set apart for a common purpose, such as grazing, and waste land may be brought under the plough only with the permission of the Revenue authorities, and on payment of assessment. The village government vests in a hereditary headman, known by an old vernacular name, such as *patel* or *reddi*, who is responsible for law and order, and for the collection of the Government revenue. He represents the primitive headship of the tribe or clan by which the village was originally settled.

"(2) The joint or landlord village, the type prevalent in the United Provinces, the Punjab and the Frontier Province. Here the revenue was formerly assessed on the village as a whole, its incidence being distributed by the body of superior proprietors, and a certain amount of collective responsibility still, as a rule, remains. The village site is owned by the proprietary body, who allow residences to the tenantry, artisans, traders and others. The waste land is allotted to the village, and, if wanted for cultivation, is distributed among the shareholders. The village government was originally by the *punchayet* or group of heads of superior families. In later times one or more headmen have been added to the organisation to represent the village in its dealings with the local authorities; but the artificial character of this appointment, as compared with that which obtains in a raiyatwari village, is evidenced by the title of its holder, which is generally *lambardar*, a vernacular derivative from the English word 'number.' It is this type of village to which the well-known description of Sir H. Maine's *Village Communities* is alone applicable, and here the co-proprietors are in general a local oligarchy with the bulk of the village population as tenants of labourers under them."

Village Autonomy.—The Indian villages formerly possessed a large degree of local autonomy, since the native dynasties and their local representatives did not, as a rule, concern themselves with the individual cultivators, but regarded the village as a whole, or some large landholder as responsible for the payment of the Government revenues, and the maintenance of local order. This autonomy has now disappeared owing to the establishment of local, civil and criminal courts, the present revenue and police organisation, the increase of communications, the growth of individualism, and the operation of the individual *raiyatwari* system, which is extending even in the north of India. Nevertheless, the village remains the first unit of administration; the principal village functionaries—the headman, the accountant, and the village watchman—are largely utilised and paid by Government, and there is still a certain amount of common village feeling and interests.

Punchayets.—For some years there was an active propaganda in favour of reviving the village council-tribunal, on *Punchayet* and the Decentralisation Commission of 1908 made the following special recommendations:—

"While, therefore, we desire the development of a *punchayet* system, and consider that the objections urged thereto are far from insurmountable, we recognise that such a system can only be gradually and tentatively applied, and that it is impossible to suggest any uniform and definite method of procedure. We think that a commencement should be made by giving certain limited powers to *Punchayats* in those villages in which circumstances are most favourable by reason of homogeneity, natural intelligence, and freedom from internal feuds. These powers might be increased gradually as results warrant, and with success here, it will become easier to apply the system in other villages. Such a policy, which must be the work of many years, will require great care and discretion, much patience, and judicious discrimination between the circumstances of different villages; and there is a considerable consensus of opinion that this new departure should be made under the special guidance of sympathetic officers."

This is, however, still mainly a question of future possibilities, and for present purposes it is unnecessary to refer at greater length to the subject of village self-government. An Act was passed in 1912 to provide for the establishment of *punchayets* in the Punjab; but it was contemplated that the areas for which these bodies would be established would be larger than villages, and their functions are limited to the disposal of petty civil suits. In the Punjab, it may be mentioned, village self-government survives to a considerable extent, on a basis of custom, and the desirability of bringing it under statutory regulation has been questioned.

Municipalities.—The Presidency towns had some form of Municipal administration, first under Royal Charters and later under statute, from comparatively early times, but outside of them there was practically no attempt at municipal legislation before 1842. An Act passed in that year for Bengal, which was practically inoperative, was followed in 1850 by an Act applying to the whole of India. Under

this Act and subsequent Provincial Acts a large number of municipalities was formed in all provinces. The Acts provided for the appointment of commissioners to manage municipal affairs, and authorised the levy of various taxes, but in most Provinces the commissioners were all nominated, and from the point of view of self-government, these Acts did not proceed far. It was not until after 1870 that much progress was made. Lord Mayo's Government, in their Resolution of that year introducing the system of provincial finance, referred to the necessity of taking further steps to bring local interest and supervision to bear on the management of funds devoted to education, sanitation, medical charity, and local public works. New Municipal Acts were passed for the various Provinces between 1871 and 1874, which, among other things, extended the elective principle, but only in the Central Provinces was popular representation generally and successfully introduced. In 1881-2 Lord Ripon's Government issued orders which had the effect of greatly extending the principle of local self-government. Acts were passed in 1883-4 that greatly altered the constitution, powers, and functions of municipal bodies, a wide extension being given to the elective system, while independence and responsibility were conferred on the committees of many towns by permitting them to elect a private citizen as chairman. Arrangements were made also to increase municipal resources and financial responsibility, some items of provincial revenue suited to and capable of development under local management being transferred, with a proportionate amount of provincial expenditure, for local objects. The general principles thus laid down have continued to govern the administration of municipalities down to the present day. In several Provinces there are, besides municipalities, "notified areas," *i.e.*, small towns which are not fit for full municipal institutions, but to which parts of the Municipal Acts are applied, their affairs being administered by nominated committees. These are to be regarded as embryo municipalities.

Local Boards.—The establishment of boards for dealing with local affairs in rural areas is a relatively recent development. No such boards existed in 1858, though some semi-voluntary funds for local improvements had been raised in Madras and Bombay, while in Bengal and the United Provinces consultative committees assisted the district officers in the management of funds devoted to local schools, roads and dispensaries. The system of raising cesses on land for purposes of this description was introduced by legislation in Madras and Bombay between 1865 and 1869; in the case of Bombay, nominated committees were to administer the proceeds of the cess. The year 1871 saw a wide development of legislation for local administrative purposes, partly due to growing needs, and partly the result of the financial decentralisation scheme of Lord Mayo's Government, various Acts being passed in different Provinces providing for the levy of rates and the constitution of local bodies, in some cases with an elected element, to administer the funds. The whole system was reorganised in accordance with the policy of Lord Ripon's Government. Under the Orders of 1881-2 the existing local committees were to be replaced by a system of boards extending all over the country. The lowest administrative unit was to be small enough to secure local knowledge and interest on the part of each member of the board, and the various minor boards of the district were to be under the control of a general district board, and to send delegates to a district council for the settlement of measures common to all. The non-official element was to preponderate, and the elective principle was to be recognised, as in the case of municipalities, while the resources and financial responsibilities of the boards were to be increased by transferring items of provincial revenue and expenditure. It was, however, recognised that conditions were not sufficiently advanced or uniform to permit of one general system being imposed in all provinces, and a large discretion was left to Local Governments. The systems introduced in different parts of India by the Acts of 1883-5 (most of which are still in force) consequently varied greatly.

Mofussil Municipalities.—The total number of municipalities has altered little for many years past. New municipalities have been formed from time to time, but there have also been removals from the list. There was, indeed, a rather marked decrease according to the last decennial review (1902-12) and the number in 1911-12 was actually less than it was thirty years earlier. This result was brought about by the reduction to "notified areas" of a considerable number of the smaller municipalities in the Punjab and United Provinces. The figures showing the constitution of the municipalities call for little comment. Taking them as a whole, the proportion of elected members was in 1911-12 rather more than a half, whereas in 1901-02 it was slightly less. The proportions of non-officials and Indians, already high in 1901, also increased during the decade. Elected members are in the majority in the cities of Bombay, Madras and Rangoon and in Bengal (excluding Calcutta), Bihar and Orissa, the United Provinces, and the Central Provinces; in the North-West Frontier Province and Baluchistan, on the other hand, there are no elected members, and in Burma they form a small minority. Non-officials outnumber officials everywhere, and Indians outnumber Europeans to an even greater degree, except in Rangoon. Taking the municipalities individually, some of the commissioners are elected in the great majority of cases. Representation in the larger municipalities is in general by wards or classes of the community, or both. Voters must be residents not below a specified age, and property or status qualifications are generally laid down. The Chairman or President of the Municipal Corporation is sometimes nominated under the orders of the Local Government, but more often chosen by the commissioners from among themselves. The only provinces in which there has been in the past a large proportion of elected non-official chairmen are Madras, the Central Provinces, and the two Bengals; but Bombay has now to be added to the list, in view of the changes made in that province in the closing years of the decade. Various provisions exist as to the exercise of control by Government, particularly as regards finance and appointments. No loans can be raised without Government sanction, and generally speaking municipal budgets, and alterations in taxation, require the sanction of the Local

Government, or if a Commissioner. Proposals or giving municipal committees a larger degree f independence were put forward by the Decenralisation Commission, and some action on hese lines has been taken. Government may rovide for the performance of any duty which he commissioners neglect, and may suspend hem in case of incompetence, default, or abuse f powers.

Municipal Revenues.—In the provinces n which octroi is levied generally, it is the most mportant source of income. The octroi uties have admitted disadvantages, but they re familiar through long usage to the inhabiants of the North and West of India. The ossibility of abolishing them was under consieration during the last decade, and it was decided in the United Provinces to take this step n many municipalities, but the alternative of irect taxation is not a popular one. Precautions re taken to limit the tax to articles actually onsumed in a town, and to prevent it from ecoming a transit duty. The list of dutiable rticles contains in each case only staple articles f local consumption and goods in transit are llowed to pass in bond or receive a refund of he duties on leaving the town. Articles of food re the most important class of goods subject o octroi taxation.

Incidence of Taxation.—A tax on houses nd lands is levied to some extent in ll provinces, and is the main source of unicipal revenue where there is no octroi. axes on professions and trades, and on animals nd vehicles, are generally levied, as also is a ater-rate in the large towns that have been furnished with water works. Tolls on roads and ferries and lighting and conservancy rates contribute to the receipts in most provinces. The average incidence of municipal taxation per head of municipal population in 1911-12, for British India, as a whole, was Rs. 2·95. Leaving out of account the Presidency towns, where the figures are higher, the provincial averages ranged from Rs. 3·08 in the North-West Frontier Province and Rs. 2·38 in the Punjab, to Rs. 1·35 in Madras and Rs. 1·02 in Coorg. Other sources of revenue are municipal lands and buildings, conservancy receipts (other than the rates), educational and medical fees, receipts from markets and slaughter-houses (a very important item in Burma), and interest on investments.

Municipal Functions.—Municipal functions are classified under the heads of public safety, health, convenience and instruction. Within these heads the duties are many and varied. Expenditure, apart from that on general administration and collection, which amounts to something less than 10 per cent. of the total, is similarly classified. The principal normal functions of municipalities now are the construction, upkeep, and lighting of streets and roads, and the provision and maintenance of public and municipal buildings; the preservation of the public health, principally with reference to the provision of medical relief, vaccination, sanitation, drainage and water-supply, and measures against epidemics; and education, particularly primary education. Money is raised by loan for water-supply and drainage schemes, the cost of which is too large to be defrayed from ordinary revenues.

THE PRESIDENCY TOWNS.

The corporations of the Presidency towns ccupy a special position, and are constituted nder special Acts.

Calcutta.—The municipal administration f Calcutta is regulated by the Calcutta Munipal Act of 1899, which replaced an Act of 1888, ie working of which had not been altogether tisfactory. The Corporation, as remodelled y the Act of 1899, consists of a Chairman, ppointed by the local Government, and fifty mmissioners, half of whom are elected at iennial ward elections, while the remainder e appointed, four each by the Bengal Chamber Commerce and the Calcutta Trades Associaion, two by the Port Commissioners, and teen by the local Government. The Act also nstitutes a smaller body, the General Comittee, consisting of the Chairman with twelve the commissioners, four elected by the ward mmissioners, four elected by the other commisoners and four appointed by the local Governent. There are various special committees nd sub-committees. An amending Bill has ublished.

The entire executive power is vested in the hairman, to be exercised subject to the approv- or sanction of the Corporation or General mmittee, whenever this is expressly directed the Act. To the Corporation are reserved e right of fixing the rates of taxation and such neral functions as can be efficiently performed a large body, while the General Committee ands between the deliberative and executive authorities, and deals with those matters that are ill-adapted for discussion by the whole Corporation but too important to be left to the disposal of the Chairman alone. Power is reserved to the local Government to require the municipal authorities to take action in certain circumstances, and their sanction is required to large projects.

Bombay.—The municipal corporation of Bombay, which formed the model for the new Calcutta constitution, dates in its main features from 1872 and continues to be regulated by the Act of 1888 as amended. Some important changes were made by the City of Bombay Police Charges Act of 1907, which relieved the corporation of the police charges of the city, and made over to them in exchange further responsibility for primary education, medical relief and vaccination.

The Corporation consists of 72 councillors, of whom 36 are elected by wards, 16 by the justices of the peace, 2 by the Fellows of the University, and 2 by the Bombay Chamber of Commerce, the remaining 16 being appointed by Government. The general municipal government is vested in the Corporation, while the ordinary business is transacted by a Standing Committee of 12 councillors, 8 appointed by the Corporation and 4 by Government. The president of the corporation is elected by the councillors but is not, like the chairman of the Calcutta Corporation, an executive officer. The

chief executive authority is vested in a separate officer, appointed by Government, usually from the ranks of the Indian Civil Service, styled the Municipal Commissioner, who can, however, be removed by a vote of 45 councillors.

Madras.—A new Municipal Act for the City of Madras was passed in 1904. By this Act the number of the municipal commissioners, to whom as a body the name Corporation was now applied, was increased from 32 to 36, besides the President, and provision was made for the appointment of three commissioners each by the Madras Chamber of Commerce and the Madras Trades Association, and of two by such other associations, corporate bodies, or classes of persons, as the Local Government might direct, while the number to be elected as divisional elections was fixed at 20. Under the Act previously in force the total number of elected commissioners was not more than 24. The remaining commissioners were appointed, as they are under the new Act, by the Local Government, who also appoint the President. The Act of 1904 also introduced various other changes in the law which need not be specially noticed; it was modelled to a large extent on the Calcutta Act of 1899. Executive authority is vested in the President, who is removable under the existing law, by a vote of 28 commissioners. A Standing Committee, consisting of the president and eight other commissioners, is mainly concerned with financial and building question. The President, like the chief executive officers in Calcutta and Bombay, is usually a member of the Indian Civil Service. The number of persons enrolled as voters in 1911-12 was 9,824 rather more than 6 per cent. of the total adult male population. The control of the Local Government over the municipality has hitherto been more stringent than in the other Presidency towns.

DISTRICT AND LOCAL BOARDS.

The duties and functions assigned to the municipalities in urban areas are in rural areas entrusted to District and Local Boards. The systems of rural local government in the various provinces differ widely. The Madras organisation, which provides for three grades of local boards, most nearly resembles the pattern set in the original orders. Throughout the greater part of that province important villages and groups of villages are organised as "Unions", each controlled by a PANCHAYAT. These bodies receive the proceeds of a light tax on houses, and spend them mainly on sanitation. Next come the Taluk Boards, which form the agency for local works in the administrative sections into which the districts are divided. Finally, there is the District Board, with general control over the local administration of the district. In Bombay there are only two classes of boards, for districts and TALUKAS respectively. In Bengal, the Punjab, and the North-West Frontier Province the law requires a District Board to be established in each district, but leaves the establishment of subordinate local boards to the discretion of the Local Government. The Bengal Act authorises the establishment of village Unions also, but this provision has not been very largely used. The United Provinces Act formerly in force directed the establishment of district and sub-district boards, but the latter were abolished, as mentioned below, in 1906. The system in the Central Provinces bears some resemblance to that which prevails in Madras, the villages being aggregated into "circles", and the circles into "groups", each of which has a Local Board, while for each district there is a District Council having authority over the Local Boards. In Assam district boards have not been introduced, and independent boards are established in each sub-division. Neither district nor sub-district boards exist in Burma, or in Baluchistan. District boards were started in Lower Burma in accordance with Lord Ripon's Local Self-Government Resolution of 1882, but the members took no active interest in them, and they died out after a few years. The district funds are now administered by the Deputy Commissioners of districts.

Elective Principle.—The degree to which the elective principle has been introduced varies greatly in different parts of India; but there is a considerable proportion of elected members everywhere, except in the North-West Frontier Province, where the system of election was abolished in 1903. On the whole, however, the principle of representation is much less developed in rural than in municipal areas. In Madras the elective system, previously applied to the district boards only, was extended to the Taluk Boards in 1909. In the United Provinces and the Central Provinces there is a substantial majority of elected members.

Chairmen.—The various Acts usually leave it to the Local Government to decide whether the Chairman of the district board shall be elected or nominated. In most provinces the Collector has, as a general rule, been appointed, though in the Central Provinces the president is elected, and is usually a non-official. In the United Provinces election, subject to the veto of the Local Government, was prescribed by the Act of 1906, but in practice the Collector is chosen. As regards the subordinate boards, the law and practice vary. Generally speaking, the sub-district boards are on the footing of subordinate committees or agencies of the district boards, with very limited powers and resources; but in Madras they exercise independent authority, subject to the general control of the district boards, in regard to the less important roads, primary education, medical work, and sanitation.

Provision is made, on much the same lines as in the case of municipalities, for the exercise of control in certain directions by Government or its officers.

Sub-District Boards.—The Decentralisation Commission, having in view the admitted failure of sub-district boards as a whole, under existing arrangements, except in Madras and Assam, put forward proposals for making them the principal agencies of rural board administration by giving them independent resources, separate spheres of duty, and large responsibilities. Proposals for giving the district boards a larger measure of independence were also put forward.

Revenue and Expenditure.—The sources of income open to rural boards are much narrower and less elastic than those of the municipalities. The greater part of their revenue is derived from a cess which they are empowered to levy on the land, and which usually does not exceed one anna in the rupee on the annual rent value (or, in ryatwari provinces, the Government assessment). The cess is ordinarily collected by Government agency along with the land revenue, and varies in amount with the latter. Since 1905 the income derived from the land cess has been supplemented by a special Government contribution calculated at the rate of 25 per cent. of that income. Substantial amounts, apart from this special contribution, are granted to the district boards by the Local Governments for various purposes. Apart from receipts in connection with their educational and medical institutions, and markets, the only other important sources of independent revenue are pounds and ferries, and, in Madras, road tolls. Except in Madras, the sub-district boards have generally no independent sources of income, and merely receive such moneys as the District Boards may allot to them. In Madras the Taluk Boards receive half the land cess levied in their areas, as well as certain miscellaneous revenues.

District and Local Boards.—The following table shows the general constitution of the boards in each province, the figures in italics relating to local boards, the others to district boards.

Province.	Number of Boards.	Total Number of Members.	By Appointment.			By Employment		By Race.	
			Ex-officio.	Nominated.	Elected.	Officials.	Non-Officials.	Europeans.	Indians.
Madras	25	779	124	293	362	279	500	130	649
	96	*1,652*	*97*	*782*	*773*	*409*	*1,243*	*66*	*1,586*
Bombay	26	553	126	182	245	132	421	71	482
	215	*3,123*	*526*	*1,205*	*1,392*	*590*	*2,533*	*138*	*2,985*
Assam	*19*	*318*	*76*	*58*	*184*	*80*	*238*	*135*	*183*
Bengal	25	513	134	166	213	151	362	85	428
	72	*854*	*63*	*384*	*407*	*97*	*757*	*37*	*817*
Bihar and Orissa ..	18	390	109	130	151	124	266	128	262
	41	*499*	*61*	*314*	*124*	*79*	*420*	*70*	*429*
United Provinces ..	48	922	47	245	630	262	660	102	820
Punjab	28	1,114	258	507	349	271	843	73	1,041
	13	*283*	*14*	*79*	*190*	*14*	*269*	*2*	*281*
N.-W. Frontier Province.	5	219	51	168	..	51	168	26	193
Central Provinces and Berar.	21	521	..	140	381	67	454	13	508
	81	*1,343*	..	*347*	*996*	*151*	*1,192*	*9*	*1,334*

POLICY OF GOVERNMENT DEFINED.

The Government of India issued on April 28th, 1915, a long resolution dealing with the growth and future of local self-government in India. From what has gone before it will have been seen that the Decentralisation Commission made many and detailed recommendations on this question, and the intention of the resolution was to summarise policy on these points, as well as to complete the chain of pronouncements of policy which commenced with the education resolution and was followed by the sanitary resolution. Owing however to the wide diversity of conditions in India, and the extent to which local self-government must be a provincial question, it was not apparently possible to lay down broad and simple lines, especially as in the main the development of local self-government is a question of the provision of funds, and no one has suggested whence they shall come, except in the way of doles from the Imperial Exchequer, which is already overburdened. The Resolution was therefore received with mixed feelings. Those who expected a declaration of a bold forward policy were disappointed, whilst those who realised the difficulties inherent in the working of the principle until some means of providing the necessary funds are devised realised that it went as far as possible in existing conditions.

The resolution commenced with the expression of opinion that the results on the whole have **justified the policy** out of which local self-government arose. The degree of success varies from province to province and from one part of a province to another, but there is definite and satisfactory evidence that of a growth of a feeling of good citizenship, particularly in the large towns. "On all sides there are signs of vitality and growth." Of the obstacles in the way of realising the ideals of the past the resolution placed in the forefront the smallness and inelasticity of the local revenues, then the indifference still prevailing in many places towards all forms of public life.

On a review, the Government of India decided to accept the view of the local-government or administration as to the degree of progress possible at the present time. Local Governments and Administrations, the resolution added, were prepared to advance in the direction of the main recommendations of the Decentralisation Commission.

Turning to details the resolution showed that of the 695 **Chairmen of Municipalities** 222 consisted of elected non-officials, 248 of elected officials, 51 of nominted non-officials, 174 of nominated officials. The election of non-official chairmen has long been urged by Indian politicians, and their views have been so far accepted that the majority of Local Governments are in favour, of substituting, so far as possible, non-official for official chairmen. With regard to the larger municipalities, the Bombay system is now very much in favour. This consists in the main of a constitution under which an elected chairman is the mouth-piece of the corporation, whilst the head of the executive is an official nominated by Government but under the control of the Corporation. Whilst not pressing this system on all Local Governments, the resolution pointed out that it had the advantage of securing a continuous and strong executive administration by a paid staff, whilst maintaining the corporate control and activity of the municipal board. As to the **financial resources** of the municipalities, it was shown that the aggregate income of the 701 municipalities in existence at the close of 1912-13 (excluding the Presidency towns and Rangoon) amounted to £3,282,845, or Rs. 4,92,42,675 apart from extraordinary receipts, or an average of £4,683 or Rs. 70,245 a year. This shows a very rapid expansion. Contributions from Government have materially assisted this expansion. Since 1911, the Government of India have made grants amounting to £3,076,466 (Rs. 4,61,47,000), of which £368,200 (Rs. 55,23,000) are recurring, for urban sanitation. Municipalities have also received their share—the exact figure is not easily ascertainable—of the large educational grants made by the Government of India since 1911, amounting to about £3,987,800 (Rs. 5,98,17,000), of which £826,666 (Rs. 1,24,00,000) are recurring. Municipal boards have been relieved of all charges for the **maintenance of police** within municipal limits. In almost every province the recommendation that municipalities should be relieved from financial responsibility for famine relief and should receive assistance from Government in the case of severe epidemics, has been already given effect to, or the principle has been accepted. The Government of India have also accepted a further recommendation, namely, that assistance may legitimately be given by Government to poorer municipalities which, without it, would be unable to carry on the normal standard of administration required from them.

On the very important subject of financial control, which is sometimes described as minute the Government of India suggested that the municipalities should have a freer hand with regard to their budgets, the only check being the maintenance of a prescribed minimum balance. They held this out as the policy which should steadily be kept in view.

The Decentralisation Commission recommended that **sub-district boards** should be universally established and that they should be the principal agencies of rural administration. The Government of India left this question to the discretion of the Local Governments. The Local Governments favoured a policy where district and sub-district boards should contain a large preponderance of elected members. They took the view, in which the Government of India concurred, that an official should remain chairman of every district and sub-district board. The total number of district and sub-district boards in 1913 was 199 and 536 respectively, with an aggregate income of £3,787,219 (Rs. 5,68,08,292). In the same year they received specially large grants from the sums allotted by the Imperial Government for education and sanitation. The resolution analysed at some length the proposal that district boards should be empowered to levy a railway or tramway cess, in order to expedite the improvement of communications. The Government of India have empowered district boards to levy a special extra land cess of three pies in the rupee on the annual rent value of land for the construction of light railways or tramways, conditional on the proposal obtaining the assent of three-fourths of the members of the board. The Government of India also decided that the board could issue debentures secured on the railway property when its accumulated funds were insufficient to bear the cost of construction. They also recommended that the present restrictions on the financial powers of the boards should be gradually relaxed, in the direction of securing full discretion subject to the maintenance of the prescribed working balance.

Turning to the organisation of the **villages** the resolution expressed the views of the Government of India towards the establishment of panchayets in the following passage:—"where any practicable scheme can be worked out in co-operation with the people concerned, full experiment should be made on lines approved by the local government or administration concerned." With this general recommendation they left the matter to the local authorities. With regard to the **Presidency Corporations**, the Decentralisation Commission recommended that the Bombay system of an unofficial chairman and an official head of the executive should be generally followed. Bengal and Madras agreed generally with the proposal, but Rangoon regarded it as unsuitable to the conditions there obtaining. The Government of India declined to endorse the suggestion that a **Local Government Board** should be formed in each Province for the control of the local bodies. In conclusion, the resolution summarised the policy of the Government of India towards the development of local self-government as one of prudent boldness, calculating risks but not afraid to take them in the cause of progress.

Since this resolution was issued the Bombay Government has appointed a strong mixed committee to consider the whole question of local self-government in the rural areas, whose report is awaited with great interest.

Municipalities.—With this general introduction we can now turn to the statistical results of the working of Local Self-Government. The following table gives information as to the constitution of municipal committees, taxation, &c., in the chief provinces in 1916-17:—

——	Population within Municipal Limits.	Number of Municipalities.	Total Number of Members	By Qualification.			By Employment.		By Race.		Incidence of Municipal Taxation per head.	
				Ex-Officio.	Nominated.	Elected.	Officials.	Non-Officials.	Europeans.	Indians.		
Presidency Towns.											*s.*	*d.*
Calcutta	861,501	1	50	—	25	25	4	46	17	33	13	11
Bombay	979,445	1	72	—	16	56	6	66	15	57	17	1
Madras	518,660	1	33	1	14	18	4	29	10	23	5	9
Rangoon	284,935	1	25	1	5	19	2	23	14	11	15	11
District Municipalities.												
Bengal	1,973,614	113	1,543	116	508	919	188	1,355	135	1,408	3	1
Bihar and Orissa	1,180,919	55	780	123	188	469	130	650	76	704	2	0
Assam	131,168	22	232	40	98	94	55	177	32	200	3	1
Bombay and Sind	2,366,394	156	2,169	376	796	997	436	1,733	106	2,063	3	8
Madras	2,237,784	70	1,089	89	452	548	190	899	115	974	2	4
United Provinces	2,982,309	84	1,019	64	86	869	85	934	86	933	2	9
Punjab	1,617,393	100	1,156	226	390	540	244	912	89	1,067	3	8
N. W. Frontier Province	141,928	6	117	34	83	..	35	82	17	100	5	5
Central Provinces and Berar	899,408	57	795	15	276	504	160	635	58	737	2	1
Burma	690,829	44	565	179	289	97	200	365	131	434	3	6

Sanitation.

The history of the sanitary departments in India goes back for about fifty years. During that period great improvements have been effected in the sanitary condition of the towns, though much remains to be done; but the progress of rural sanitation which involves the health of the great bulk of the population has been slow, and incommensurate with the thought and labour bestowed on the subject. "The reason lies in the apathy of the people and the tenacity with which they cling to domestic customs injurious to health. While the inhabitants of the plains of India are on the whole distinguished for personal cleanliness, the sense of public cleanliness has ever been wanting. Great improvements have been effected in many places; but the village house is still often ill-ventilated and over-populated; the village site dirty, crowded with cattle, choked with rank vegetation, and poisoned by stagnant pools; and the village tanks polluted, and used indiscriminately for bathing, cooking and drinking. That the way to improvement lies through the education of the people has always been recognised."

Of recent years the pace has been speeded up as education progressed, education developed, and funds were available. In a resolution issued in May 23rd, 1914, the Government of India summarised the position at that time, and laid down the general lines of advance. This resolution (*Gazette of India*, May 25th, 1914) should be studied by all who desire to understand the present position and policy: its main features are summarised here.

The governments in India have moved more rapidly of late. In 1898, the Government of India issued an important statement of policy. In 1908, imperial grants amounting to Rs. 30,00,000 (£200,000) a year were made to local Governments. A new department of the Government of India was created in 1910 in order to relieve the Home Department of education, sanitation and some other branches of the administration. In addition to sanitary conferences held by local Governments, three All-India sanitary conferences were convened at Bombay, Madras and Lucknow, respectively, over which the Hon'ble Sir Harcourt Butler presided as Member of the Governor-General's Council in charge of the department concerned. These conferences were attended by non-officials as well as officials, by laymen as well as professional sanitarians. Again, the **Indian Research Fund Association** has been founded to further the prosecution of research, and the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of communicable diseases. To this fund the Government of India make an annually recurring grant of 5 lakhs of rupees (£33,333). Moreover, since the constitution of the new department of the Government of India, imperial grants have been made to local Governments and Administrations to the amount of Rs. 4,61,47,000 (£3,076,466), of which Rs. 55,23,000 (£368,200) are recurring, and Rs. 4,06,24,000 (£2,708,266) non-recurring. In addition, grants amounting to Rs. 82·33 lakhs (£548,866) a year have been made to district boards in certain provinces, a substantial portion of which will, it is hoped, be expended on rural sanitation. These grants have rendered practicable the execution of schemes which a few years ago seemed beyond the limits of financial possibility; and there can be little doubt that the movement for sanitary reform is now well established and progressive throughout the country.

Organisation.—As a result of the Plague Commission's Report Lord Curzon's Government took up with vigour the reorganisation of the sanitary department. Research institutes were started and an appointment of Sanitary Commissioner with the Government of India was created. The functions of this officer were to advise the Government of India upon sanitary and bacteriological questions to settle with local Governments the principles on which an advance should be made and to organise and direct research throughout India. The arrangement was not completely successful. Among the disadvantages, the separation of research from clinical work deterred men from entering the department, and the office work in connection with research prevented the Sanitary Commissioner from undertaking wide and constant touring. The organisation was accordingly modified in 1912. The Sanitary Commissioner is now the independent adviser to the Government of India in all technical and sanitary matters, but all questions of personnel as well as the administration of the bacteriological department and research generally have been placed under the control of the Director-General, Indian Medical Service, with the Sanitary Commissioner as his staff officer.

The Sanitary Organisation.

The sanctioned strength of the superior sanitary organisation in India now is

(*a*) A Sanitary Commissioner with the Government of India.

(*b*) A bacteriological department comprising—

(*i*) thirteen laboratory appointments distributed as follows:—

Central Research Institute	1 Director and 3 Assistants.
Bombay Bacteriological Laboratory	1 Director and 2 Assistants
King Institute of Preventive Medicine, Madras .	1 Director and 1 Assistant.
Pasteur Institute, Kasauli	1 Director and 1 Assistant.
Pasteur Institute, Coonoor	1 Director and 1 Assistant.

(*ii*) fifteen new appointments recently sanctioned for the prosecution of research work and direct investigation in the field.

(c) The following establishments under local Governments :—

Province.	Sanitary Commissioners.	Deputy Sanitary Commissioners.	Health Officers, Sanitary Engineers.			
			1st class.	2nd class.	Sanitary Engineers.	Deputy or Assistant Sanitary Engineers.
Madras	1	3	12	19	1	6
Bombay	1	5	4	9	1	..
Bengal	1	5	6	17	1	2
United Provinces	1	4	11	17	1	3
Punjab	1	2	2	5	1	1
Burma	1	2	4	16	1	2
Bihar & Orissa	1	3	2	8	1	2
Central Provinces	1	..	..	2	1	..
Assam	1	1	..	..	1	..
North-West Frontier Province	1	1	1	1	..	..
Delhi	1	..	3	..	1	..
Total	11	26	45	94	10	16

Provincial Agency.—In their resolution, dated the 23rd May 1912, the Government of India provided for a large increase in the number of Deputy Sanitary Commissioners and for the appointment of health officers (of the first-class for larger municipalities and of the second-class for the smaller towns) on the lines of detailed proposals received from local Governments. Twelve additional appointments of Deputy Sanitary Commissioner, thirty-five appointments of health officer of the first-class and a large addition to the number of second-class health officers were sanctioned in 1912 and 1913, the entire cost of the additional Deputy Sanitary Commissioners on the basis of the scale of pay fixed for Indians and half the cost of the health officers being met by imperial grants. The Government of India also advised local Governments to take powers, where these did not exist, to require a municipality to appoint a health officer and to veto the appointment of an unfit person. Such powers already exist in the Bombay Presidency, and have recently been taken by legislation in Bengal. Simultaneously, the Government of India recommended the system in force in Madras whereby every municipality is required to employ one or more trained sanitary inspectors in proportion to population. Sanitary inspectors are now being employed in large numbers in towns. In addition, the civil surgeon in every district is the sanitary adviser of the local authorities and in most provinces controls the vaccination staff. The provision of an increased staff of sanitary engineers is engaging urgent attention.

Voluntary Agency.—The Government of India attach great importance to the organisation of voluntary agencies and have recently made a grant of Rs. 20,000 (£1,333) a sum equivalent to that given by the Bombay Government to the BOMBAY SANITARY ASSOCIATION, which was founded in 1903, and now has corresponding branches in several districts and Native States.

Research.—The policy of the Government of India is to keep the control of research under itself, but to decentralise other branches of sanitation. The creation of an imperial department is no departure from that policy, and the large imperial grants already mentioned have been made without any interference with provincial Governments. While the general direction of a policy of public health must remain with the central Government, all detailed control and executive action are, and will be, left to local Governments. The Sanitary Commissioner with the Government of India is a touring officer empowered to consult and confer informally with local Governments and their officers upon matters connected with sanitation. He is not permitted to encroach upon the authority of Local Governments over the officers under their control.

Provincial Officers.—The position of Provincial Sanitary Commissioners towards the administrative heads of the medical department varies somewhat in different provinces. The Government of India do not wish to interfere with the arrangements which local Governments may consider best suited to local conditions but they desire to insist on the importance of defining the functions of the two officers and securing to the Sanitary Commissioner the position of responsible technical adviser to the local Government in all matters affecting public health.

Sanitary Boards.—In every province, sanitary boards have been composed with varying powers, some being merely advisory, others having authority to sanction schemes and allot funds. These boards are composed of officers belonging to the medical, sanitary, engineering and other branches of the civil services with the

addition of non-officials. The Government of India view with favour and confidence the devolution of financial authority and responsibility to these boards, and they commend to local Governments the appointment of a permanent salaried secretary to the board where this has not been done. They believe that such an appointment, wherever made, has resulted in an increase of efficiency.

Training.—Arrangements for training the superior sanitary staff are now engaging the attention of the Government of India. The chief difficulty at present is to provide courses in practical hygiene and in the study of the bacteriology and etiology of tropical diseases. It is hoped in the near future to make arrangements in India for the former and to utilise the schools of tropical medicine at Calcutta and elsewhere for the latter. Meanwhile, a British diploma in public health is required from candidates for the post of Deputy Sanitary Commissioners and health officers of the first class. The problems of public health in India are vitally complicated by the fact that biting insects are a prominent factor in the dissemination of disease and it is obviously desirable to provide in India, as soon as possible, a complete course of training for sanitary officers.

Training classes for sanitary inspectors are now held in all the more important provinces.

Department of Public Health.—A substantial beginning has thus been made for the development of a department of public health and Indians have been freely enlisted for it. The posts of Deputy Sanitary Commissioner and health officer are now open to Indians. Nine Deputy Sanitary Commissioners out of 26 and the majority of health officers are Indians. The new bacteriological department consisting of 28 officers is also open to duly qualified Indians.

As health officers and Sanitary Engineers gradually relieve Deputy Sanitary Commissioners of much of the drudgery of inspection and routine work, it is hoped that the latter will be set free to deal with epidemics and communicable diseases from a higher plane, and to consider issues of public health wider than those which they are able to review to-day. It is therefore important to provide in advance free interchange between them, the laboratory workers and those carrying out practical research in the field.

Progress of Research.—Research is slowly lifting the veil which hides the secrets of disease and mortality and opening up fields of inquiry scarcely thought of a generation ago. The discovery by Sir Ronald Ross of the part played by the mosquito in the communication of malaria and the appointment of the Plague Commission in 1898 are landmarks in the history of Indian Sanitation. In 1902, a research institute was founded at Guindy in Madras, named the King Institute after Lieutenant-Colonel King, C.I.E., I.M.S., in view of his devoted efforts in the cause of sanitation in that presidency. In 1905 Lord Curzon's Government summed up the position and the policy of the Government of India in regard to the establishment of laboratories for the study of problems of public health in India. The functions of the central-laboratory were original research, the preparation of curative sera and the training of scientific workers. The functions of the provincial laboratories were diagnosis and special research connected with local conditions. This policy has been steadily developed. The Central Research Institute has been established at Kasauli. The Plague Research Laboratory at Parel has been extended and re-equipped and is now the bacteriological laboratory for the Bombay Presidency; and a proposal is under consideration to attach to it a school of tropical medicine. A research laboratory and school of tropical medicine are under construction at Calcutta. Pasteur institutes exist at Kasauli and Coonoor. A third is about to be established in Burma, and it is under discussion to establish others in Assam (where it will be combined with a research laboratory) and Bombay.

Besides the routine work connected with the bacteriological diagnosis of disease, antirabic treatment, the manufacture of various vaccines and sera and general research, these laboratories at different times have been the centres of many special investigations, notable amongst which are those on plague and enteric fever. It is hoped that before long each province in India will have a laboratory fully equipped for research.

Research Fund Association.—The foundation of the Indian Research Fund Association in 1911 has marked an important era in sanitary progress. The control and management of the association are vested in a governing body, the president of which is the Member in charge of the Education Department of the Government of India. The governing body is assisted by a scientific advisory board, of which not less than three members have seats on the governing body. They examine all proposals for work in connection with the scientific objects of the association and report as to their importance and feasibility. The members of this board are appointed for one year, but are eligible for re-election, and they have power to add to their number. The present members are the Director-General, Indian Medical Service, the Sanitary Commissioner with the Government of India, the Director of the Central Research Institute at Kasauli, the Officer in charge of the Central Malarial Bureau and the Assistant Director-General, Indian Medical Service (Sanitary). Sir Ronald Ross has been elected an honorary consulting member. The membership of the Indian Research Fund Association is open to non-officials. Every donor of Rs. 5,000 is entitled to become a permanent member, while every subscriber of Rs. 100 per annum can be a temporary member. Members of the association are entitled to attend and take part in the annual general meeting of the association and to receive copies of the reports and other publications issued from time to time by the association. Although, so far, the fund has been financed solely by the Government of India, it is hoped that in time Indian philanthropists will contribute towards the expansion of the association by founding chairs of research by financing experimental research measures and otherwise.

The association has also started a journal for the publication of medical research work done in India—the "INDIAN JOURNAL OF MEDICAL RESEARCH"—published quarterly. The fav-

curable reception which has been accorded to the first three numbers is evidence of the increased interest that is being taken in sanitary science in India to-day.

Water Supply.—Few subjects have received more attention of late than the provision of a piped supply of filtered water in towns. Complete figures are not available but sums amounting to at least Rs. 3,51,58,297 (£2,343,886) have been spent during the last 20 years on completed schemes. Projects costing Rs. 1,10,03,433 (£933,562) are under construction and projects costing Rs. 1,14,44,750 (£762,983) have been prepared and sanctioned. These figures are exclusive of the expenditure in the Presidency towns and Rangoon.

Drainage.—Drainage schemes on modern lines, are the basis of all sanitary improvement in urban areas. The demand for them is scarcely less than that for piped water and is steadily on the increase. As in the case of water supply complete figures are not available but the known expenditure during the last twenty years has been considerable and is now rapidly increasing. The expenditure on completed works outside the Presidency towns and Rangoon during that period amounted to Rs. 97,65,049 (£651,003), whereas the cost of the works under construction is estimated at Rs. 1,54,20,502 (£1,028,033). In the beginning precedence over drainage was given to piped water-supply but experience has demonstrated the advantage of introducing both concurrently. Without drainage there is no means of carrying off the surplus water and without piped water-supply it is difficult to flush the drains properly.

When drainage schemes on modern lines were first started in this country, there seems to have been a bias against the use of sewers, and, wherever possible, open drains were adopted. Experience has shown that the preference for the open drain and the fear that sewers would give excessive trouble were not well founded. On the contrary, much of the advantage of a drainage system is lost if only open drains are used, as the old system of hand-carriage latrines has to be continued. Moreover, economy in establishment is possible only in the case of a sewage system.

Pilgrimages.—Pilgrimages necessitating as they do the collection of large numbers of persons, often more than a million, at one place at one time have an important sanitary aspect mainly in connection with cholera and other communicable diseases. The Government of India recently decided to examine the sanitary arrangements at the chief places of pilgrimage throughout India and local Governments were asked to appoint provincial committees for this purpose under the presidency of the Sanitary Commissioner with the Government of India with a view to formulate practical schemes of improvement. The inquiry is still in progress but the Government of India have already made a grant of Rs. 2 lakhs (£13,333) and promised an additional grant of 4 lakhs of rupees (£26,666) spread over four years towards the improvement of the pilgrim route to Badrinath; and they have made a further recurring grant of Rs. 20,000 (£1,333) a year for the same object. The important question of improving the conditions of the pilgrimage to the Hedjaz by Indian Musulmans is undergoing close scrutiny. The Governor General in Council anticipates that these inquiries will lead to signal sanitary improvements and promote the convenience and comfort of many millions of His Majesty's loyal Indian subjects.

Rural Sanitation.—The following observations are based on practical experience of rural sanitation :—

(*a*) Travelling dispensaries may be used to spread a knowledge of the simple facts regarding the more common diseases. For this purpose the sub-assistant surgeons in charge should be given a special training in hygiene. Once they become known to the people as healers of the sick their advice as sanitarians may become more acceptable.

(*b*) The improvement of the village water-supply is as important as it is difficult. Apparently, excellent results have been obtained by disinfection of wells with permanganate of potash. Experiments are being made in different parts of India in the use of tube-wells, etc. It might serve as an useful object lesson to use pumps and tube-wells for the provision of water at fairs, schools, hospitals, and local public offices. In some localities, a tank supply alone is possible and the difficulty is to protect even new tanks from pollution.

(*c*) In several provinces, notably in Madras, village unions or circles have been formed and their committees entrusted with small grants for the improvement of the sanitation of the village site. This measure might be extended experimentally elsewhere. It is calculated to encourage discussion and inquiry regarding sanitary work.

(*d*) Village midwives are, in some districts, encouraged by small grants of money and rewards to attend at the head-quarters hospital for a short and simple course of training. These measures open up possibilities with reference to a reduction in infantile mortality and children's diseases generally.

(*e*) In most districts in India, the civil surgeon is also in theory the sanitary officer of the district. His duties at head-quarters, however, do not allow him to tour and inspect in the district to the extent that is necessary; even in the case of epidemics in the district it is sometimes not possible for him to leave headquarters. In some provinces, district sanitary officers have been appointed and there can be little doubt that many more such appointments are required and that one of the most urgent and hopeful measures for promoting rural sanitation is the appointment of well qualified and whole-time district health officers to control and organise all sanitary arrangements and experiments in the district.

Birth and Death Rates.—The population of the areas in which births and deaths were registered in 1916 was 238,527,685. 8,856,283 births and 6,940,436 deaths were registered; the rates per mille being 36·27 and 29·10 as compared with an average of 38·87 and 30·08 respectively for the previous five years.

The lowest birth rates were recorded in Coorg 28·74; Assam 30·52; Bengal 31·89; and Madras 32·5; but an excess of births over deaths was noticed in all the provinces except Ajmer Merwara. The death-rates of Bengal, the Punjab, the United Provinces, and Burma were lower than in the preceding year, while Bombay's death rate was 7·2 in excess of the rate for the previous year.

Province.	Birth Rates (per mille).		Death Rates (per mille).	
	1915.	1916.	1915.	1916.
Delhi	47·91	49·39	28·97	32·92
Bengal	31·80	31·89	32·83	27·37
Bihar and Orissa	40·4	36·6	32·2	32·8
Assam	33·60	30·52	30·86	28·59
United Provinces	43·48	43·09	30·04	29·50
Punjab	43·6	45·6	36·33	30·7
N. W. Frontier Province	31·7	33·8	23·61	20·1
Central Provinces and Berar	47·95	43·85	35·91	39·95
Madras	31·2	32·5	22·0	21·9
Coorg	25·33	28·74	31·08	27·23
Bombay	37·10	35·98	26·12	33·32
Burma, Lower	33·39	32·75	25·12	22·61
Burma, Upper	38·01	35·30	32·72	26·21
Ajmer-Merwara	43·78	38·68	26·03	40·48
Total ..	37·82	37·13	29·94	29·10

Chief Diseases.—There are three main classes of fatal disease: specific fevers, diseases affecting the abdominal organs, and lung diseases. Intestinal and skin parasites, ulcers and other indications of scurvy widely prevail. The table below shows the number of deaths from all causes and from each of the principal diseases in British India and death-rates per 1,000:—

Years.	Deaths from all Causes.	Cholera.	Small-Pox.	Fevers.	Dysentery and Diarrhœa.	Plague.	Respiratory Diseases.
1912 ..	7,090,991	407,769 1·71	89,357 ·37	3,936,085 16·49	292,216 1·22	263,037 1·10	247,736 1·04
1913 ..	6,845,018	294,815 1·24	98,155 ·41	3,983,112 16·71	246,578 1·03	198,456 0·83	237,229 1·00
1914 ..	7,155,771	280,730 1·18	76,590 ·32	4,092,345 17·16	278,225 1·17	266,588 1·12	261,149 1·09
1915 ..	7,142,412	404,472 1·70	83,282 ·35	3,990,287 16·73	261,800 1·10	380,501 1·60	257,721 1·08
1916 ..	6,940,436	288,047 1·21	60,642 ·25	4,085,784 17·13	248,381 1·04	205,527 ·86	286,247 1·20

Cholera.—The deaths ascribed to cholera in British India in 1916 numbered 288,047 against 404,472 in the previous year, equivalent to rates of 1·2 and 1·7 respectively. The Central Provinces, Bihar and Orissa, Assam, and Bengal with cholera death rates of 2·82, 2·6, 2·16, and 1·56 respectively, suffered considerably more than did the remainder of British India. The Punjab and the North-West Frontier Province, each with a cholera death-rates of 0·09, escaped very lightly. The decreased incidence in Burma is likewise noteworthy.

Small-pox.—There were 60,642 deaths attributed to small-pox, 0·25 against 0·35 in the previous year when the rate very closely represented the average incidence. Assam, Madras, Bengal and Bihar and Orissa suffered most, returning small-pox death-rates of 0·55, 0·5, 0·3 and 0·3, respectively. These four administrations were in fact responsible for 84 per cent. of the total small-pox mortality of India in 1916.

Plague.—A comparatively very severe outbreak in the Bombay Presidency: moderately severe outbreaks in the Central Provinces and the United Provinces; and the relative immunity of the Punjab are the outstanding features of plague in India in 1916. Taking India as a whole 1916 was a mild plague year; there were 205,527 deaths, 0·86 compared with 1·6 in 1915. The highest provincial plague death-rates were Bombay, 4·06; Central Provinces, 2·06, United Provinces, 1·05. All other administrations had rates lower than unity; Only twice in the last twelve years, *viz.*, in 1907 and 1911 has the Bombay Presidency suffered more from plague than in the year under report. Punjab reported only 3,278 plague deaths which is far and away the lowest figure reported since this disease made its incursion into the north of India at the end of last century.

Fevers.—The 'fever' death-rate rose from 16·73 in 1915 to 17 13: in other words 59 per cent. of the deaths from all causes are collected together in a heterogeneous group that defies any attempt at detailed analysis. The proportion of total deaths ascribed to 'fevers' varies markedly in the different provinces. In the year under report it was less than a quarter in Madras, a third in Bombay, about three-quarters in Bengal and as high as eighty per cent. in the North-West Frontier Province. The vast majority of deaths from malaria are certainly included in this ill-defined group but so are deaths from many assorted pathological conditions in which fever may be a prominent symptom.

MEDICAL INSTITUTIONS.

Hospitals, Dispensaries, &c.—There were 2,980 of these institutions in existence at the end of 1915: during 1916 the number was increased by 71, giving a total at the end of 1916 of 3,051. The necessity for more is felt in almost every part of India. With the increase in the dispensaries there has been a greatly increased number of in-patients and out-patients and the total number of patients treated has gone up from 33,392,621 in 1915 to 34,454,775 in 1916, while the number of operations has increased from 1,349,086 to 1,376,504, an increase of 27,418.

Medical Colleges.—There are five medical colleges (Bombay, Madras, Calcutta, Lahore and Lucknow), the students in which numbered in 1915, 2,096 including 79 women. There are also 17 medical schools, the students in which numbered 2,936. There is an X-ray institution at Dehra-Dun where a class of instruction was attended by 20 students. Branch installations opened at Delhi and Simla are obtaining a large number of patients.

Pasteur Institutes.—There were Pasteur Institutes for anti-rabic treatment at Kasauli (Punjab), Coonoor (Madras) and Rangoon (Burma). In these three institutes 7,224 patients were treated during the year. The foundation stone of another was laid at Shillong in November.

Lunatic Asylums.—The treatment of lunatics at asylums prevails on a comparatively small scale; but the asylum population is steadily increasing. The number of asylums in 1916 was 21. The number of patients admitted was 2,529 as against 2,339 in 1915. The total asylum population of the year was 9,547.

Leper Asylums.—There are many leper asylums among which may be mentioned the Madras Government Leper Asylum, the Matunga Leper Home, Bombay, the Trivandrum State Leper Asylum and the Calcutta Leper Asylum. There are also many asylums or homes, frequently under some sort of Government supervision, including about 50 asylums of the Mission to Lepers.

The Tropical Diseases.

This account of the chief tropical diseases was written by Major Gordon Tucker, I.M.S., of Grant Medical College :—

If the principal scourges of the European in the tropics, namely, malaria, dysentery, and typhoid, could be removed, there would still remain the strain of climate as a source of disease and a cause of deteriorated health, not amounting for a time to actual illness, but eventually showing its effects in lessened resistance to the wear and tear of life, premature senility of the tissues, and diminished fertility. This results mainly from the transfer to a hot climate of an individual whose heat-regulating mechanism has previously adapted itself to conditions where the body temperature has to be maintained some 40° above that of the surrounding air. On arrival in a country where the temperature of the air is perhaps the same as that of the living tissues, it is obvious that there must be a sudden and violent disturbance of such mechanism. This mechanism is very complex and exists for the purpose of striking a balance between the heat formed by the changes in the tissues, and the heat lost from the lungs and by radiation from the surface of the skin. But beyond this there is no doubt a regulation of the temperature dependent in some way on the normal working of the central nervous system, as is shown by the remarkable alteration which may take place in the temperature of parts of the body when the brain has been subjected to some gross lesion.

In the tropics the amount of carbonic acid given off by the lungs is reduced about twenty per cent., the number of respirations per minute is reduced, and there is lessened activity of the lungs. This shows that there is less tissue change (or combustion) going on in the tissues, that is to say, diminished heat-production. The same is shown in the diminished amount of work done by the kidneys. As regards heat-loss, this is almost entirely effected through the skin, 70 per cent. of the heat of the body in temperate climates going off by radiation and conduction, and 15 per cent. by evaporation. When however the temperature of the tropical atmosphere rises, the loss by radiation falls to nothing, and all the heat has to be dissipated by evaporation from the surface. Consequently, practically all the work of losing heat, which strikes the balance with the heat production and maintains the body at a normal temperature, falls upon the sweat glands which are therefore in a state of continued and abnormal activity. In hot dry atmospheres the water evaporates as soon as formed, but in conditions of heat with great humidity, such as obtain during the worst months of the year in Calcutta and Bombay, the skin is kept continually moist by trickling beads of perspiration. Herein lies the comfort and healthiness of the punkah which removes excessive moisture. But it is obvious that in order to keep the temperature of the body normal there must be increased flow of blood to the surface of the body, a state quite different from the conditions under which the organs of the European have been trained. This favours those sudden chills to which Europeans are so subject, and acts prejudicially to the working of the internal organs, especially those subserving digestion. A blast of cold air coming on the congested skin in the early hours of the morning must chill the surface, causing a sudden contraction of the cutaneous vessels, and tending to produce a rapid flux of blood to the deeper parts, inducing a congestion of the mucous membrane of the bowels, and from that results the "morning diarrhœa" which is occasionally severe and exhausting. Such a state of affairs may become chronic, and so lead up to one of the climatic diarrhœas which are a frequent cause of invaliding. Moreover a sudden congestion of the liver and spleen in a person who has had malaria, may be followed by a malarial hepatitis or splenitis, and repeated attacks of these conditions may result in permanent enlargement of these organs; or at any rate, in the case of the stomach and liver, to derangement of function and so to chronic dyspepsia or insufficient manufacture of bile.

Again, the chronic hyperæmia of the skin favours the development of fungi and microbes. Hence the existence of ringworm of various kinds from which Europeans frequently suffer. There are microbes which, even in temperate climates, are found within the layers of the skin or on the surface. On account of the chronic congestion and moisture of the skin in tropical climates these microbes not only become abundant but virulent, and hence the Boils which are often a serious affliction in the hot months. We frequently come across most distressing cases where the patient is covered from head to foot with them. When the boil comes to a head and softens it is easy to afford relief by opening each, and so relieving tension, but the worst kind is the "blind boil" which forms as a hard red mass, intensely painful and not coming to a head, and here an incision gives little relief. Until lately these cases were very unsatisfactory to treat, and atients would recover after weeks of pain and much reduced in health. Fortunately we have in the vaccine treatment a most successful method, the vaccine used being either a stock one and generally acting like magic: or, in a small percentage of cases requiring to be made from the boils themselves. In still other cases the infection of the skin causes the formation of Carbuncles, which are more serious but require treatment on the same lines.

Another more common condition resulting from the congestion of the skin is Prickly Heat. This results from acute inflammation about the sweat glands and distention of their orifices, producing red papules and little vesicles, the site of intense itching. The trouble is believed to result from the proliferation of a particular microbe in the skin, which alters the reaction of the perspiration. Be this as it may, inoculation of the skin is likely to take place through scratching, and so to the formation of boils. In some cases the skin is so intensely inflamed that the region of the shoulders and neck feels like leather, or the surface gives the impression of sand-paper. It is a serious condition in young infants, as

the irritation prevents sleep, interferes with digestion and so promotes diarrhœa, so that this simple malady may be the starting point of a dangerous illness. Flannel next to the skin should be avoided in the hot weather as it is so liable to start the irritation. A good lotion consists of two teaspoonfuls of Eau-de-cologne in ten ounces of a 1 in 2000 solution of perchloride of mercury, dabbed on the skin and allowed to dry: followed by dusting with equal parts of boric acid powder and talc.

To avoid the heat the European flies to the punkah. The electric punkah has been one of the greatest blessings introduced during recent years into Indian towns as its use insures a good night's rest in place of the weary hours of sleeplessness which formerly wore out the temper and the mental energy of the European during the hottest months. Still this blessing is not without its attendant dangers. Most common are attacks of muscular rheumatism, sudden internal chills causing diarrhœa, attacks of colic, ordinary nasal catarrh, and sometimes bronchitis or pneumonia. The electric punkah does away with the mosquito curtain, which does not conduce to the free circulation of air, and gives good ventilation in its place.

Finally, we have the effects of a continued high temperature on the working of the nervous system. As has been remarked by the late Lt.-Col. Crombie, I.M.S., (in a valuable paper on "The measure of physical fitness for life in the Tropics," to which the writer is much indebted). "In the tropics there is going on continually and unconsciously a tax on the nervous system which is absent in temperate climates. The nervous system, especially those parts of it which regulate the temperature of the body, are always on the strain, and the result is that in time it suffers from more or less exhaustion." The mean temperature of a European in India is always about half a degree higher than it is in a temperate climate, and it may be raised to 99° or 100° after severe bodily exertion. When, under the strain of a severe hot moist and sultry season, the heat-centre gives out, or as it is said is "inhibited," we have all the serious phenomena of HEAT STROKE. But in the less marked but long drawn out process of nervous exhaustion we have the common tropical effect of deficient mental energy, generally commencing with unnatural drowsiness or loss of appetite and a yearning for stimulants, which culminate in that lowering of nerve potential which we know so well as NEURASTHENIA. This nervous disturbance due to climate is likely to be most marked, as Crombie points out, in two classes of persons, namely those who suffer from obesity, and those who are members of families which may be designated as "neuropathic," that is whose nervous systems are naturally unstable. To these may be added persons with naturally defective digestion and those who have a predisposition to gout.

To sum up, it will be seen that the effects of long residence in the tropics are real and permanent, not only in the direction of lowered bodily health, but in undue wear of the nervous system, which may not only be apparent during active service in duties involving strain, anxiety or responsibility, but also after retirement; so that the chances of longevity of the retired Indian official are not up to the normal, and the "extra" which the Insurance Office puts on such lives is not only to cover the risks incidental to life in the tropics, but also the diminished vitality of those who have survived to enjoy their pension and ease.

But there are other Indian risks, and these are most likely to affect travellers, due to the effects of heat on food. Microbes multiply with profusion in milk, and decomposition is liable to occur in meat within a very short time after killing. Milk should always be boiled; and owing to the dirt in railway dining-rooms, and in many hotels, and the carelessness of the lower type of native servant employed therein, it would be better to rely on tinned milk or on a supply of Horlick's milk tablets, when travelling long journeys by rail and in the smaller towns. Beef should never be eaten underdone, as it is a prolific source of tapeworm in India. There is also liability to contamination of food by flies and dust. Indian cooks, though among the best, have little regard for sanitation, and consequently the state of the cook-house should be carefully supervised.

MALARIA.

Attacks of malaria, dysentery, and enteric represent the principal risks to the European travelling in India. Malaria is the commonest cause of fever in the tropics and subtropics, but the risks therefrom have been greatly diminished by our complete knowledge of its causation which now permits an intelligent prophylaxis, that is, taking adequate precautions against infection. The connection of certain kinds of fever with marshy soils has been recognised from ancient times, whence its old name of paludism; and the word "malaria" itself implies the belief in the existence of an emanation of poisonous air from the water-logged ground. It is now realised that the poison is conveyed solely by mosquitoes, and by the anopheline species. There are only a few of the many anophelines which carry malaria, but all are to be regarded as dangerous.

The parasite of malaria is a delicate jelly-like body which invades the red cells of the blood, and lives at their expense. It has two life-cycles, one within the blood of the human host (endogenous and sexual), the other in the stomach and tissues of the mosquito (exogenous and sexual). But the first part of the sexual cycle is prepared for in the blood of the human host.

If the blood of a patient be taken about an hour before the occurrence of the "rigor," (the shivering-fit which marks the commencement of the attack), and examined in a thin film under a high power of the microscope, some of the red corpuscles will be found to contain bodies composed of delicate protoplasm showing minute granules of dark pigment in their substance. These bodies are the parasites. The granules represent the result of the destruction by the parasite of the red colouring-matter of the blood-cell. The

latter consequently appears paler than natural and is enlarged. In the parasite of the so-called benign tertian fever, if the blood be again examined when the rigor is commencing, the little mass of jelly is found to have divided into from twelve to twenty minute spheres all held together by the remains of the degenerated red cell, and with minute masses of pigment in the centre. Later the group of spherules has burst through the envelope that held them, and has appeared free in the blood-fluid. Many of these free spherules are attacked and absorbed by the phagocytes, but those which escape destruction effect their entrance into other red blood cells and go through the same process of sexual division, taking forty-eight hours for the process. On the time taken for this cycle to occur depends the periodicity of the fever, the attack appearing every third day, whence the name tertian fever. Another variety of malarial parasite, not very common in India, takes seventy-two hours to complete its cycle, hence called the "quartan" variety.

There is also a third kind of parasite called the "malignant tertian," called by the Italians the aestivo-autumnal parasite, which also takes forty-eight hours to go through its cycle, but which gives rise to a more irregular fever, and has more pernicious effects on the system and is also liable to produce severe nervous symptoms, such as unconsciousness, often ending in death with very high fever. Each kind of parasite has its special characteristics which can be observed by microscopical examination. Consequently expert examination of the blood is always advisable in cases of fever, not only to show that malaria is present, but also to distinguish the particular kind which is causing the trouble.

Within the blood there also appears the first stage of the sexual life of the parasite in the shape of male and female elements, which result from some of the parasites which do not undergo the usual segmentation described above, and which exist for the purpose of allowing further development in the non-human host, which in the case of this particular parasite is the mosquito. These sexual elements are especially in evidence in the blood of cases of the pernicious variety of malaria, in the form of crescentic bodies which obtain considerable protection from the phagocytes, and many therefore persist for some time in such blood. "Crescents" appear only in malignant fevers, and persons who harbour them are of course a danger to the community, inasmuch as the mosquitoes of the locality are infected from them, thus rendering such village or street unhealthy from malaria.

The sexual elements of the malarial parasites when taken into the stomach of the mosquito which sucks up the blood of its victim, undergo certain changes, the male element extruding flagellate or hair-like processes which fertilise the female. The latter thereupon changes into a body endowed with the property of locomotion, which makes its way into the coats of the stomach of the insect, and becomes divided up into a vast number of minute cysts, each of the latter becoming packed with minute rod-like bodies. The cysts rupture into the body-cavity of the mosquito, and the rods, thereby set free, become collected within the substance of the salivary glands, and ultimately make their way to the base of the proboscis. On such an infected mosquito pushing its proboscis into the human skin when it wishes to draw blood some of the rods are injected into the blood stream. They then enter red blood corpuscles and go through the various cycles described above.

From three to five days, or as long as a fortnight, after being bitten by such a mosquito the patient has an attack of fever, sometimes preceded by pains in the limbs, headache, and malaise. This is soon succeeded by a feeling of intense chill, perhaps associated with vomiting. The skin becomes cold and blue, the shivering is excessive and prolonged, constituting the "rigor" stage. In this state the patient is in great distress, and obtains little sense of relief from the blankets which he heaps up over himself. Although the surface of the body is very cold, the temperature, taken in the arm-pit or mouth, shows a rise to 103° or higher. In a quarter of an hour or more the "hot stage" comes on, the face becoming flushed, the surface of the body red and warm, the small quick pulse becoming full and bounding, and perhaps the patient complains of throbbing headache. He remains thus for a few hours and then occurs the "sweating stage," perspiration breaking out about the head and face, and soon extending to the whole body. Great relief is experienced when this is entered on, and is likely to be followed by a refreshing sleep. During the paroxysm the spleen is often enlarged and may be the seat of considerable pain. There is also often troublesome cough from a concomitant bronchitis. With repeated attacks the enlargement of the spleen is liable to become permanent, the organ coming to form a large heavy tumour with special characteristics, the so-called "ague cake," which is common among the children of malarious districts. Europeans who suffer from severe or repeated malaria are likely to suffer from permanent ill-health in the shape of anæmia, dyspepsia, or easily-induced mental fatigue.

Treatment.

The traveller in India should endeavour to guard himself against the bites of mosquitoes. This can be done to a great extent by the use of mosquito curtains, the mosquito seeking the blood of its victim mainly at night. But when travelling by train protection is difficult. There are some odours which mosquitoes appear to dislike. Sprinkling the pillows with lavender water is sometimes efficacious, or smearing the hands with lemon-grass oil. Camps should not be pitched in the neighbourhood of native villages, if it can be avoided. Travellers should provide themselves with thermometer and a supply of quinine tabloids.

During the cold stage the patient should be well covered, and hot fluids administered, unless vomiting is present. Quinine should not be taken in this stage as it increases the distress. A diaphoretic, or sweating mixture, should be administered every two or three hours until the skin becomes moist, and throughout the hot stage: this soon gives relief, and when the stage of perspiration has been reached, the

grains of quinine should be given, and repeated in five grain doses every six hours until the temperature becomes normal. Thereafter the drug should be continued for a few days in doses of five grains twice a day. This is calculated to ward off a second attack, or, at any rate, to reduce its severity and prevent a third. If there is vomiting, quinine tabloids are not likely to be digested and absorbed; in such cases the drug should be given in a mixture dissolved in a dilute acid. The advantage of quinine tabloids is that the unpleasant taste is avoided.

There are some severe continuous malarial fevers which appear to resist the action of quinine. These are the pernicious tertian fevers, which so often cause difficulty in diagnosis inasmuch as for a few days they may suggest enteric fever, especially to those inexperienced in tropical diseases. In such cases large doses of quinine are required, the skin being kept moist meanwhile by a diaphoretic mixture. Some of these fevers last for a week or longer, but the majority of them yield to quinine in three or four days. It is in such that an early examination of the blood is so useful. In certain cases of profound malarial poisoning or where, for any reason, quinine does not appear to be acting when administered by the mouth, recourse must be had to the injection of quinine into the tissues. This should always be done by a skilful physician, and with special precautions, as some cases of tetanus have occurred after quinine injections taken from stock solutions, even when apparently given with every care. The "vaporoles" prepared by Messrs. Burroughs Wellcome & Co., which consist of little glass capsules containing preparations of the drug dissolved in sterile and non-irritating fluid, appear to be absolutely devoid of risk and are very efficacious.

TYPHOID FEVER.

By Typhoid or Enteric Fever is meant a continued fever, lasting for three weeks or longer, due to the entrance into the intestinal canal of a particular bacillus (the typhoid bacillus), which not only produces serious abdominal trouble but also symptoms referable to a generalised infection of the blood by the bacillus and the poisons which it engenders. Formerly the scourge of the British Army in India, especially among the younger soldiers, it has been reduced to a very low point, through the prophylactic use of Sir Almroth Wright's vaccine, continuous attention to the sanitary condition of the soldiers' quarters, improvement of water supplies, and skilful medical treatment.

"Paratyphoid" is a term applied to certain fevers which have all the characters of typhoid, but with a rather lower mortality, and which are due to infection by bacilli which are closely related to the typhoid bacillus.

The fact that typhoid more frequently attacks the new arrivals to the tropics renders this disease one of the risks which tourists have to face, but this can be minimised by knowledge of the manner in which the typhoid bacillus affects an entrance into the system.

Typhoid Fever has now been shown to be a common affection among Indians, contrary to what was held some fifteen years ago. In Bengal and the Punjab, according to Leonard Rogers (Fevers in the Tropics), the maximum of cases for all classes occurs during the hot months, while the maximum for Bombay is in the rainy season. But taking the European cases only he finds that the largest number of cases falls within the dry, cold and hot seasons, and considers that this is due to the European being most frequently infected through contaminated dust, this class of person paying greater attention now-a-days to the condition of the water which he drinks: unlike the Indian who will drink water out of the nearest tap.

As is well known, infection of typhoid is most commonly produced by contamination of drinking water. Great care is therefore necessary in boiling and filtering drinking water and in protecting the vessels in which it is kept from contamination by dust. In the neighbourhood of all native villages the soil is laden with animal dejecta which, of course, is very likely to be associated with disease-producing microbes. Hence infection of the food in cook-houses and shops is easily produced by the wind carrying the dust from latrines and other foul areas. Uncooked vegetables produced from gardens watered by sewage-containing fluid are also very dangerous, and should be avoided by the Indian traveller. Lastly oysters taken from estuaries which receive rivers laden with organic matter from the villages on the banks are believed to afford special protection to the typhoid bacillus, and when eaten raw are dangerous.

In many cases the onset of the disease is sudden, with headache, shivering and vomiting, but in a little less than half the onset is insidious, the patient being out of sorts, slightly feverish, perhaps with occasional looseness of the bowels, loss of appetite and a little sickness. He ultimately takes to his bed, generally dating the commencement of his illness from this event, and there forthwith begins a period of at least three weeks of anxiety for his friends and relatives, inasmuch as enteric fever, as seen among Europeans in India, is characterised by its greater severity and longer duration. The temperature rises gradually day by day during the first week, remains at a fairly constant high level during the second, becomes irregular with daily remissions during the third, and in the majority of cases is succeeded by a period of convalescence, during the first part of which the greatest care in dealing with the patient is required. The bacillus produces its most important effects on the lower portion of the small intestine, certain glandular structures in the wall of the bowel becoming inflamed, enlarged, and finally ulcerated. It is on the formation of these intestinal ulcers that many of the worst complications depend The ulcerative process favours, first a looseness of the bowels, later an exhausting diarrhœa. Moreover the destruction of some of the coats of the bowel may open up an adjacent blood vessel and produce alarming or even fatal hemorrhage. And again the whole thickness of the bowel may be perforated, causing death

from collapse and peritonitis. This is the danger which the physician has in view throughout the case. It can only be guarded against by the most careful nursing and attention to the dietary. Other dangers are bronchitis and failure of the heart, especially during the third week. During the stage of convalescence the same care has to be taken with the dietary as the ulcers are undergoing healing, and an error might lead to the rupture of one of them when all danger may well be expected to have passed. Finally, owing to the depressing effects of climate, convalescence is often attended with prolonged mental depression.

In the matter of treatment it is absolutely essential that the patient should have the benefit of skilled nursing. Fortunately highly-trained European nurses can now be obtained from any populous centre, though occasions arise when the demand exceeds the supply. If possible two nurses should be obtained for day and night duty respectively. Unless it is absolutely necessary to remove him, the patient should be nursed where he falls ill and not sent long distances by train. At the most he should travel to the nearest large town where there is a Civil Surgeon. Treatment mainly consists in keeping the fever within bounds, and thereby sparing the strain on the heart which is great during the three weeks of continued fever. This is effected in great part by the system of hydrotherapy, that is, treating the patient by continued tepid baths or by frequent sponging with tepid water to which a little toilet vinegar should be added. There is no special drug which is of any use in aborting the fever, but this does not mean that drugs are of no use in typhoid. On the contrary the complications, which are many, will be detected as they arise by the careful physician, and there is no disease which tries more than this the skill of the doctor and the care of the nurse, who will frequently bring to convalescence what seems to be an almost hopeless case. Abdominal distension, for instance, is a frequent and serious complication in Indian typhoid, and should be treated as soon as detected. It results partly from the decomposition of the intestinal contents, partly from loss of the muscular tone of the bowel. It hinders the respiration and the action of the heart, and favours the occurrence of perforation. Diet consists almost entirely of milk, either pure, diluted with barley water or whey, or as a jelly.

Lastly a word should be said about the importance of typhoid inoculation to those intending to travel in India or the tropics. It is better to have Wright's prophylactic vaccine injected before leaving home, but if this is not done, it should be submitted to on arrival in Bombay. In the majority of cases the only discomfort resulting is a little passing tenderness at the site of inoculation: in some cases there are a few hours of fever: and in the worst the patient feels out-of-sorts for twenty-four hours. The inoculation (with a larger dose) should be repeated on the eighth day. Attention to this small precaution as a routine measure would obviate most of the catastrophes which we witness on occasions among "globe-trotters" who have come to the country for pleasure or health.

DYSENTERY.

The term Dysentery is applied to several forms of infective inflammation of the large bowel, in which the principal symptoms are griping, abdominal pain, frequent straining, and the passage of a large number of evacuations characterised by the presence of blood and mucus. The changes which take place occur in the mucous membrane of the large bowel, and are first an acute catarrh succeeded by ulceration more or less extensive, and sometimes going on to gangrene.

The disease is endemic in India, and is in fact common in Eastern countries, and in Egypt. It is liable to arise in epidemic form especially among armies in the field. It is caused by a contaminated water supply, and by the infection of food by dust and flies. Dysentery is probably caused by several varieties of micro-organisms but for all practical purposes may be said to be divided into two great groups, one due to the amœba of dysentery, and the other caused by a bacillus described by Shiga and known as bacillary dysentery. The latter form is more common in Japan and in the north-eastern side of the Indian peninsula; the amœbic form being that most commonly seen in the Bombay Presidency. The bacillary form is characterised by the presence of a very large number of evacuations perhaps as many as a hundred or even more in the twenty-four hours. In the amœbic form there are seldom more than twenty evacuations in the day, and there is less fever and general depression than in the bacillary variety. In the amœbic form there is greater tendency to thickening of the bowel wall, and to the dangerous complication or sequel of abscess of the liver.

After a few days of severe illness should the patient recover there is a danger that the disease may become chronic, a condition which is associated with emaciation and profound weakness. The chronic form is also more likely to eventuate from the amœbic type.

The frequency with which it attacks Europeans in India may be judged from the admissions of the European soldiers into hospital, the figures of admissions for each of the years 1910 and 1911 being 7·7 per thousand of strength.

The treatment of the bacillary form with an anti-dysenteric serum has had good results. In the amœbic form most Indian physicians still rely, and rightly so, on the use of ipecacuanha. This has to be given with particular precautions and with a previous dose of opium to diminish the liability to vomiting. Recently, thanks to the work of Leonard Rogers, a valuable drug has been placed in our hands, in the form of emetine, an alkaloid derived from the ipecacuanha root; and which when injected into the deeper layers of the skin, gives all the good results of ipecacuanha without its unpleasant effects. It is of special value in the case of children in whom acute dysentery is a very serious disease. We have hereby obtained one more efficient weapon in the contest with one of the common diseases of India.

ABSCESS OF THE LIVER.

There are several varieties and causes of abscess of the liver but the term is applied in India to the single abscess which frequently forms as the result of amœbic dysentery, the latter generally preceding but sometimes being concomitant with the formation of the abscess. It is one of the scourges of the European in India, and is especially to be dreaded on account of the high mortality. Taking all the cases together, including the acute and chronic and all classes of the community, the death rate is about sixty per cent., but this will probably be reduced by recent improvements in the methods of diagnosis and treatment. The latest annual report of the Sanitary Commissioner with the Government of India states that next to enteric fever, hepatic abscess is the most frequent cause of death among European troops, but the admissions and deaths on account of it have decreased greatly during recent years. The report also notes that the decrease in the number of cases of liver abscess is coincident with an equally steady fall in the number of admissions to hospital for alcoholism.

The disease is most liable to attack those who, in addition to having had an attack of dysentery, have indulged, not necessarily to excess, in alcohol and general good living, and are at the same time somewhat sluggish in their habits. It is often preceded by continued fever, malaise, dyspepsia, and more or less uneasiness in the liver region, or the latter organ may be acutely enlarged and very tender. In many cases the exact diagnosis is often a matter of anxiety, but greater precision is now possible as we have come to recognise what Rogers has called the presuppurative stage of amœbic hepatitis, which is very amenable to treatment by ipecacuanha or injections of emetine. The use of this method will often prevent the case going on to the dangerous condition of abscess, which when it has once definitely formed can only be dealt with by prompt operation, which in itself has a high mortality. Further aid is now obtained by special examination of the blood and by the use of the X-rays, which will often clear up a doubtful case.

The abscess generally forms in the right lobe of the liver. Should it form on the left side it is especially liable to rupture into one of the internal organs.

The same complication may eventuate when the abscess forms on the right side. Here the principal point of rupture is into the right lung, the contents of the abscess being suddenly evacuated, in some cases without much warning, and nature thereby effecting a cure. Such a termination however is not desirable as healing will take place quicker by surgical means.

There are some abscesses which are exceedingly insidious, it often happening that patients are sent home with a fever associated with general loss of health and weight, where the existence of a deep seated abscess may not even be suspected, but in which the symptoms of hepatic abscess suddenly occur and clear up the case: or the correct diagnosis may obtrude itself by the sudden rupture as above described.

PLAGUE.

Plague is a disease of very great antiquity; its ravages and symptoms have been described with remarkable accuracy by the old historians, such as Procopius. Not many years ago it appeared to be a disease of historical interest only, but the present pandemic, which commenced about 1894, has made it a subject of the greatest importance to the inhabitants of the British Empire. It was in March 1894 that it first became prominent in Canton, and thereafter to spread to Hongkong, Macao and Pakhoi, and so along the whole of the Southern China Coast. It probably arrived in Bombay in March 1896, but it was not until the end of September that it became noticeable in that part of the native city known as Mandvi, in which the great grain supplies are collected, and wherein consequently there is an enormous rat population. In October of the same year the presence of the pestilence was officially acknowledged. Everything which the limited knowledge of the subject at that time suggested, was done to check its spread; but, in spite of all efforts, the pestilence spread from the infected city throughout the greater portion of the Peninsula, and while its ravages of late years have not been so terrible as at its first appearance, yet the disease still takes its annual toll of human life, and it has apparently become one of the endemic diseases of India. According to the official figures, plague since its appearance has been responsible for more than seven and a half million deaths within the limits of the Indian Empire. These figures should perhaps be increased by about fifteen to twenty per cent., due to defect in the registration of the causes of deaths and also to the fact that the disease often simulates other maladies for which it is likely to be mistaken by an uneducated population.

Plague is an acute infection of the blood by a bacillus which was discovered by Kitasato in Hongkong in 1894. It generally affects its entry by the skin, on which it is deposited by the rat-flea. At the site of deposit a small pustule is occasionally found which soon forms a superficial ulcer. In such cases inflammation and distention of the lymphatics may be noticed running from the neighbourhood of the small and painful ulcer to the nearest group of glands. These will be found to be enlarged and exquisitely tender, the tenderness being out of all proportion to the size of the glandular enlargement and to the amount of local inflammation. This glandular enlargement is called the Bubo, which has given the name to the most common form of the pest—Bubonic Plague.

With the appearance of the Bubo, or even a day or so before it, there is evidence of a general infection of the system, in the shape of extreme prostration, mental confusion, a furred tongue, and fever which is generally high. The pulse is accelerated, and while at the outset, especially in full-blooded muscular adults, it is likely to be full and bounding, there is sooner or later, generally soon, evidence of early failure of the strength of the cardio-vascular system. The pulse becomes quicker, smaller, and the heart

sounds feeble. As the case progresses, the primary ulcer will enlarge and become of an angry appearance, the Bubo will also enlarge and the tissues around the inflamed lymphatics will be swollen and œdematous. To this variety the term "cellulo-cutaneous plague" has been applied. The spreading ulcer, which is really a local gangrene, has been described as the plague "carbuncle"; these forming on the skin of those affected were often referred to by old historians as a prominent feature in many ancient epidemics.

These cases however are somewhat uncommon. The usual variety met with is the Acute Bubonic Plague. In this the patient is attacked with fever, and all the general symptoms of an acute infection, and on the first, second or sometimes the third day of the illness the characteristic bubo appears. The common site is among the glands of the groin, for the reason that these glands receive the lymphatics from the lower limbs and from the lower portion of the trunk up to the level of the navel, a larger area than that drained by any other group of glands. Other sites for Bubo formation are the arm-pits, the glands of the neck, those about the angle of the jaw and below the chin, and very rarely the little gland on the inner side and just above the elbow, and the small glands behind the knee joint. In some cases, generally in association with Buboes in the groin, the deep glands of the abdomen can be felt to be enlarged.

These Plague Buboes are of different kinds and it is a matter of some importance in connection with treatment and the outlook as regards recovery, to recognise the type of Bubo present in each particular case. The common variety is the "softening bubo." The enlargement increases somewhat rapidly and the hard swelling gives place to a soft doughy mass around which is a limited amount of serous effusion into the subcutaneous tissues. If the patient lives till the fifth day or thereabouts this bubo will feel like a tightly stuffed pincushion, or may give the experienced examiner the signs that the contents are of a fluid nature. On incision, pus and shreds of the disorganised gland will be evacuated, and under suitable treatment the cavity, though large, will heal up within a week or so. When these softening Buboes are allowed to rupture spontaneously a large foul cavity is produced; such are not unfrequently encountered among the poor, who have not received adequate attention during the stress of a plague epidemic.

Another variety of bubo obtains when the glands inflame and harden, the inflammation being so acute that the blood supply of the part is obstructed and the whole of the affected area sloughs out, leaving a large superficial ulcer of a very unpleasant appearance. These buboes are found where the inflamed glands are bound down beneath tense tissues, as in front of the ears and in the region of the groin. To this kind the term "indurated bubo" has been applied. Another variety the "œdomatous bubo" occurs in the neck and the arm-pit and in them the serous effusion into the tissues around the glands, present to a less extent in the common type is the essential feature. The whole arm-pit or the side of the neck may be distended by the accumulation of fluid under the skin. It is an extremely distressing kind of bubo, as the pain is great and nearly all the patients die. Also there is a rare kind the "hard late bubo," which appears after about a fortnight in cases simulating typhoid fever and lastly there are some soft buboes which abort and shrink with the rapid subsidence of the fever—the "shrinking bubo." The fever continues from the outset with slight remissions; it is generally about 103° to 104°, but it may rise to a great height from almost the initial rigor. On the third day the temperature tends to approach the normal, and almost immediately rises again. Should it rise to a point above that of the maximum temperature preceding the remission the outlook is bad but in cases which are likely to do well it rises to a point which is less than that of the preceding maximum, and after about three days gradually falls to normal, with slight daily oscillations depending on the amount of the suppuration in the buboes and their local condition.

It is to be understood that this disease is of such great virulence to human beings, on account of the early appearance of the plague bacillus in the blood-stream, that there are many instances in which death occurs before the bubo has had time to undergo the changes described above or even to form. The more acute cases are also liable to be a typical in their mode of onset. Some are taken with a wild delirium in which they are likely to attack those about them: others suffer from vomiting of blood followed by rapid failure of the heart and death; pregnant women miscarry and practically all of them die: and lastly there are cases where the general and local symptoms are slight and yet failure of the heart may suddenly ensue within a few hours of the onset. These so called "fulminant" cases are generally met with at the commencement of every epidemic in some of the descriptions of mediæval epidemics they seem to have been in the majority, and it is on account of these that plague epidemics appear so terrible to the occupants of the plague-stricken town. Fortunately, however, there is a large majority of cases which allow some scope for medical skill. The condition of the patient after the full development of the symptoms is always one which gives rise to great anxiety. The mental condition becomes dulled, which, while it mitigates considerably the distress of the sufferer, is nevertheless an indication of the action of the plague poison on the nerve centres. The eyes are suffused and often acutely congested. There may be cough, which is a bad sign as it indicates either a secondary pneumonia or the onset of an acute bronchitis, the direct result of the failure of the heart. If the latter progresses the breathing becomes more rapid, the pulse weak and almost uncountable at the wrist, the skin cold and clammy, and towards the end covered by profuse perspiration: finally, the breathing becomes irregular, and after several long-drawn gasps the patient breathes his last.

In other cases however improvement starts about the fourth day, the temperature gradually falls, and the mind clears: the bubo suppurates in due course and heals up, and the patient passes into a slow convalescence, but which is sometimes retarded by the formation of chron-

abscesses, boils, attacks of heart failure or of palpitation: or ulcers of the eyeball with infection of the whole globe and consequent loss of sight. Some recover with permanent mental enfeeblement, or persistent tremors of the limbs with difficulty in speaking with clearness.

Septicaemic Plague.

This term is applied to certain forms of acute plague where buboes do not form, or where there is uniform but slight enlargement of glands in various parts of the body with symptoms of a general blood infection. The term is misleading, inasmuch as most cases of acute bubonic plague are really septicaemic from the outset. These cases are either acute, ending fatally about the third day or sooner: or are sub-acute, with symptoms simulating typhoid fever, ending fatally in about a fortnight. In the acute cases large dusky patches of blood-effusions beneath the skin, the so-called plague spots, are sometimes found; and there may be hæmorrhages from the stomach or bowels.

Pneumonic Plague.

In this variety the plague bacillus proliferates in the lung and causes rapid consolidation of large patches of the lung tissue scattered irregularly throughout the organs; with a considerable amount of œdema, so that the lungs are engorged with blood, are large and heavy, and the bronchial tubes filled with reddish frothy fluid which contains the plague bacillus in almost pure culture. The fever is very high and the interference with respiration immediate, and death occurs from the second to the fourth day. A curious fact about pneumonic plague is that one such case is liable to give rise to others of the same type.

Treatment of the Disease.

No serum or antitoxin has so far proved of value in diminishing the mortality of the sick. Much can, however, be done by medical treatment. Absolute rest is required and the patient should not even be allowed to sit up in bed. Drugs which act as heart stimulants are required almost from the outset, and frequently these have to be administered by the skin as well as the mouth. The buboes should be fomented till they soften, and incised as soon as fluid is formed. For the pneumonic condition the administration of oxygen gas gives relief. This can be obtained in India without much difficulty. Careful nursing is essential, and fluid nourishment must be given regularly in an easily assimilable form, and complications have to be met as they arise. As regards prophylaxis by means of Haffkine's Plague prophylactic which is manufactured in enormous quantities at the Bacteriological Government Laboratory at Parel, it may be said that its use gives a threefold chance of escape from attack and a reduction of case mortality by fifty per cent.

DENGUE FEVER.

Dengue fever, otherwise known as Dandy fever or Breakbone fever, is rather common in India and is generally present in the larger towns, but it appears in manifold forms and various writers describe it differently, its identity is not always recognised; and, therefore, by many medical men is thought to be less common than it really is. On occasions it gives rise to very wide-spread epidemics. In 1902 there was an extensive epidemic on the eastern side of the Indian Peninsula, and quite recently there has been a bad outbreak in Calcutta. It is more common during the rainy season.

The onset is abrupt, with fever, slight sore throat producing cough, rapidity of the pulse, sometimes a red rash which is so fugitive that it is often overlooked, and intense pain. These pains constitute the patient's chief complaint. They are generally pains in the bones, or in the small of the back, or in some of the joints either large or small. Sometimes there is no complaint of pain in the limbs, but there is intense pain behind the eyes. The fever lasts for three or four days, during which in rare cases there may be further symptoms due to the appearance of pleurisy or even a pericarditis. Sometimes there is intense shooting pain into the little finger. Though the intensity of the symptoms may give a very serious aspect to the case, yet a fatal issue is almost unknown. After the four days of intense suffering the fever subsides somewhat abruptly, and at about this time a second rash appears, most marked over the shoulders and neck, and on the backs of the arms, or else an universal rash. It is of a dark red colour, often very like the rash of scarlet fever, or it may be like that of measles. With its appearance the more severe symptoms subside. During convalescence the patient is much depressed, and the pulse remains unduly rapid. Sometimes also pain starts again in one of the joints, or he is crippled by stiffness of the back or of several of the joints. After a shorter or longer period, from two days to ten, a second attack of fever and pain comes on which runs the same course but as a rule less severe and prolonged; in very rare cases there is a third attack.

There is no drug which will cut short the disease. From its likeness to rheumatism the salicylates are generally used, and perhaps relieve the pains. This drug should be combined with an ordinary fever mixture: large doses of bromide should be given for the headache, and the excruciating pains must be treated with morphia.

It is often impossible to distinguish the malady from influenza until the appearance of the rash.

It is believed that the poison is conveyed by the bites of a mosquito, and that this poison has characters which are analogous to the virus of Yellow Fever.

CHOLERA.

This is one of the most important diseases of India, having been endemic therein for many hundreds of years. It is always present in the country, and sometimes extends over large districts generally from some crowded centre such as the site of a pilgrimage, from which it is dispersed over the country-side by the returning bands of pilgrims. The deaths in British India from this disease in 1911 numbered three hundred and fifty-four thousand and in the following year four hundred and seven thousand. The disease is of special importance to the numerous

pilgrims both on going to and returning from Mecca.

It is essentially a water-borne disease and the exciting cause is the "comma bacillus" discovered by Koch, so called from its shape when isolated and stained. The dejecta of a person suffering from the disease, when contaminating the soil, are liable to get washed by the rains into some water-supply, which may become the source of almost unlimited infection. Such contaminated drinking water is rendered innocuous by boiling, or filtration through a Pasteur-Chamberland filter. The importance of Koch's discovery, therefore, lay in the recognition of the fact that the poison was essentially water-borne. It can also be conveyed by flies settling on food.

The disease has an incubation period of from two to seven days. After a premonitory diarrhœa with colicky pains lasting for half a day or longer, the nature of the illness is announced by violent purging and vomiting, the former having the peculiar character of rice-water. The poison may be so intense that death takes place before the purging appears, the so-called "cholera sicca." In the common form collapse is early and marked, the extremities are blue and cold, the skin shrunken, the heart weak, the surface temperature below normal, though the temperature taken in the mouth shows high fever to be present. There is a curious pinched expression of the face with deeply sunken eyes, and the patient endeavours to communicate his wishes or fears in a hoarse whisper. He is further distressed by painful cramps in the muscles of the calf and abdomen, and there is suppression of the functions of the kidneys. Death generally takes place in this the algid state. Should the patient survive he passes into the stage of reaction, the unfavourable symptoms disappearing and gradually passing into convalescence. In some of these cases which give hopes of recovery there is a relapse, the conditions of the algid state re-appearing and death taking place. It has recently been recognised as a cause of the dissemination of the disease, that patients who have recovered will continue to discharge the bacillus for many weeks.

The prevention of cholera lies in attention to water supplies, and in boiling and filtering as a matter of routine in Indian life. All the discharges from the sick should be treated with disinfectants, and soiled clothing and linen destroyed. People who have to tour in cholera-stricken districts, or who go on shooting excursions, or who find themselves in the midst of a cholera outbreak should undergo inoculation with Haffkine's preventive vaccine. Two inoculations are required, the second being more intense in its effects. The temporary symptoms which may arise after the inoculation are sometimes severe, being always more marked than after inoculation against typhoid, but the protection afforded more than makes up for the temporary inconvenience endured.

During the cholera season the mildest cases of diarrhœa should be brought for treatment to a physician, as such persons are more liable than others to contract the disease.

Treatment mainly resolves itself into meeting the extreme collapse with stimulants and warmth. There is great temptation to administer opium but in some cases this is not unattended with danger, and in others there is no capacity left in the patient for the absorption of drugs administered by the mouth. The mortality has, however, been reduced by the injection of saline fluid into the skin or directly into the veins, and also by the introduction of saline fluid of particular strength into the abdominal cavity.

Kala-Azar.

This is a slowly progressive disease associated with great enlargement of the spleen and some enlargement of the liver, extreme emaciation, and a fever of a peculiar type characterised by remissions for short periods, and due to infection by a parasite of remarkable characters which have only recently been worked out. It is attended with a very high mortality, about 96 per cent., and has up to the present resisted all methods of treatment, although some patients appear to improve for a time, only in the majority of cases to relapse later.

It is endemic in Assam, from which it has invaded Bengal, and is now often seen in Calcutta. It is also fairly often met with in Madras, though it is said that the cases are imported ones. It is very rarely seen in Bombay, and then only in immigrants from infected localities, though there appears to be a mild endemic centre in Jabalpur in the Central Provinces; so it is likely to be more frequently met with on the western side of India. It has caused great mortality among the coolies on the tea-plantations of Assam, especially among the children; but under the recent measures of prophylaxis which have been put into force since knowledge has been acquired about its real nature and method of spread, the ravages of the disease are likely to be limited. It is very rare among Europeans and then almost entirely among those who have been long in India or who have been born and bred in the country.

Infection seems generally to start in the cold weather. There is fever with rigors, and progressive wasting and loss of energy. The temperature chart is a curious one, the fever showing two remissions during the twenty four hours. Diarrhœa is common, especially during the later stages of the disease. The spleen enlarges early and is generally of enormous size producing bulging of the abdomen. A remarkable feature is the tendency to the formation of ulcers, which in many cases, especially in children, takes the form of gangrenous ulceration of the mouth and cheek. Death usually occurs from some intercurrent inflammatory condition, often pneumonia.

The parasite is found in the spleen and liver during life, and can be obtained by puncture of these organs. As thus obtained it is a minute round body of special characters. In this state it is known as the Leishman-Donovan body from its discoverers. This small body has been cultivated by Leonard Rogers in suitable media and under low temperatures, and found to develop into a flagellated, that is tail-possessing, organism. How this peculi-

organism develops outside the human host is not yet completely known. It is certainly a house-infection, which accounts for the manner in which whole families have been swept off, one member after another. Its progress has been stayed by moving families from their infected houses and burning down their former quarters. This, and other facts connected with its spread, have suggested that the agent for conveying the poison from man to man is the common bed-bug, and Patton has succeeded in developing the flagellate stage in this creature when fed on the blood of the sick.

There is a severe form of ulceration of the skin known as "Delhi Boil" from which organisms very similar to the Leishman-Donovan body were obtained many years ago. These bodies have also been cultivated outside the human host and found to develop into a flagellated organism. The two parasites, though closely allied, are nevertheless distinct.

DRUG CULTURE.

Two monographs on the cultivation of drugs n India, by Mr. David Hooper, of the Indian luseum, Calcutta, and by Mr. Puran Singh, f the Indian Forest Department, Dehra Dun, ave lately been published. Mr. Hooper, in is paper, states that one-half of the drugs in he British Pharmacopœia are indigenous to he East Indies, and nearly the whole of the est could be cultivated or exploited. The fol-owing are given as those that could be grown n quantity and as worthy of the attention of ultivators and capitalists: —

Belladonna, most of which is still imported, rows well in the Western Himalayas from imla to Kashmir, the Indian-grown plant con-ains 0·4 to 0·45 per cent. of alkaloid.

Digitalis is quite acclimatised on the Nilgiris, rowing there without any attention. The adras Store Department obtains all its re-uirements from Ootacamund, and the leaf has een found equally active to that grown in ngland.

Henbane is a native of the temperate Him-layas from 8,000 to 11,000 ft. It was introduc-d into the Botanic Gardens, Saharanpur, in 340, and it has been steadily cultivated there p to the present time, and the products sup-lied to medical depots satisfy the annual de-and.

Ipecacuanha has been raised with a small mea-ure of success in the hilly parts of India, and only requires care and attention to raise it sufficient amount to make it commercially munerative.

Jalap-root grows as easily as potatoes in e Nilgiris, and there is no reason why the nual requirements (about 4,000 lbs.) for the edical Stores of Bengal, Bombay and Madras ould not be obtained from Ootacamund.

Mr. Puran Singh discussed the subject in a mber of the "Indian Forester in 1914": he ates that most of the drugs in the British Phar-acopœia grow wild in India, and that there is eady a large export trade for some of them. e adds, however, that materials collected at random cannot be expected to fetch full prices, as they seldom come up to standard quality, and he adds: "The few drugs that are not indigenous to India could easily be made to grow in some part or other of this vast land. The great advantage accruing from the systematic cultivation of drugs is that a regular supply of genuine drugs of standard quality is assured. The variation in the quality of wild-grown drugs is sometimes a very serious drawback to finding a profitable market for them. The quality of *Podophyllum Emodi* growing wild in India is an illustration in point. This plant was discovered by Sir George Watt in the year 1888, and now, even after twenty-four years, in which it has been shown to be identical with the American drug that is being employed for pharmaceutical purposes, it still remains unrecognised by the British Pharmacopœia, which, as explained by the "Chemist and Druggist" some time ago, is solely due to the uncertainty which still exists as to its physiological activity".

Mr. Singh also points out that the Indian consumers of medicine depend mostly on herbs growing wild in the Forests, the more important of these probably numbering at least 1,000. This inland trade is very large; the possibilities in the Punjab alone being put at Rs. 50,00,000. He mentions saffron, liquorice, and salep as products exotic to India, whose cultivation in this country looks full of promise. Mr. Singh suggests that a complete survey be made of the extent of the inland trade in medicinal products found growing wild in Indian forests in order to arrive at the figures of annual consumption, and that the forest areas where the most important drugs grow should be preserved. Inquiries should be instituted as to the best methods of cultivation, and if need be, the means of extending the artificial propagation. It is to provide data to induce the private capitalist to embark on such enterprises that Mr. Singh advocates the formation of some body to go into the matter. He suggests that India is well worthy of attention by those in this country who are interested in extending the culture

of drugs in the British Empire. The Forest Department has already begun the cultivation of Indian podophyllum-root in the Punjab, United Provinces and the North-Western Frontier, and several maunds of dried rhizome are sold annually for local consumption. Mr. Hooper also shows that a start has been made in regard to the cultivation of belladonna. henbane and digitalis. One of the principal difficulties to be overcome is to ensure a ready market, and there is also always the danger of overproduction to be considered.

Essential Oils.

SANDALWOOD OIL is, by far the most, important perfumery product of India. The sandalwood tree is a root parasite, obtaining its nourishment from the roots of other trees by means of suckers. It grows best in loose volcanic soil mixed with rocks, and preferably ferruginous in character. Although in rich soil it grows more luxuriantly, less scented wood is formed, and at an altitude of 700 feet it is said to be totally devoid of scent. The best yield of oil is obtained from trees growing at an altitude of 1,500 to 4,000 feet, but the tree requires plenty of room so as to enable it to select vigorous hosts to feed it.

PALMAROSA OIL, also known as Indian geranium or "Turkish geranium oil" is another of the principal perfume products of India. It is derived from the grass, *Cymbopogon Martini*, which is widely distributed in India, where it is known as "Motya." Gingergrass is an oil of inferior quality, possibly derived from older grasses or from a different variety of the same species. Both oils contain geraniol, the proportion in palmarosa being from 75 to 95 per cent. and in gingergrass generally less than 70 per cent. These oils are used in soap, perfumery, and for scenting hair oils and pomades.

LEMONGRASS OIL is derived from *Cymbopogon citratus* and *Cymbopogon flexuosus*. The former is a native of Bengal, and is largely cultivated all over India, but the oil distilled on the Malabar Coast and Cochin is derived principally from *C. flexuosus*.

VETIVER, OR CUS-CUS, is a perennial grass, *Vetivera zizanoides*, found along the Coromandel Coast and in Mysore, Bengal and Burma, in most heavy soil along the banks of rivers. The leaves are practically odourless and only used for thatching and weaving purposes. The roots are used in perfumery and in the manufacture of mats and baskets.

THE MALABAR CARDAMOM, *Elettaria cardamomum* is the source of the seeds official in the British and other Pharmacopœias. Cardamom oil of commerce is, however, not distilled from this variety on account of the high price, but is obtained almost exclusively from the long cardamom found growing wild and cultivated in Ceylon. The oil is used medicinally as a carminative and is also employed by perfumers in France and America.

COSTUS ROOT (the root of *Saussurea lappa*) is a native of Kashmir, where about 2,000,000 lbs. are collected annually. It is exported in large quantities to China where it is used for incense. It is also used to protect shawls and clothes from the attacks of insects. Its odour resembles that of orris root.

BLUMEA BALSAMIFERA is the source of the Nagai camphor used in China for ritualistic and medicinal purposes. This shrubby composite is found in the Himalayas and is indigenous to India. It is widely distributed in India and is used by the natives against flies and other insects.

EUCALYPTUS plantations are situated chiefly in the neighbourhood of Ootacamund, Coonoor, and Wellington, at elevations varying from 5,500 to 8,400 feet, the best being at from 7,200 to 8,000 feet. The climate of this region is fairly cool, equable and moist, with a well-distributed rainfall of about 50 to 80 inches; although frosts occur, the winters are mild on the whole, and snow is unknown. The soil, a red clay overlying gneissose rock, is rich and deep in some parts, shallow and poorer in others. A large factory is being built for the distillation of eucalyptus oil at Ootacamund. It is believed there is a considerable future for the undertaking, provided a sufficient supply of the leaves is available.

Manufacture of Quinine.

Government Cinchona plantations were started in India in 1862 from seed introduced by Sir Clements Markham from South America, of which the plant is a native. There are two main centres, Darjeeling and the Nilgiri Hills. In both localities a portion of the area is owned by tea or coffee planters, and the bark they produce is either sold to the Government or exported. Several species of cinchona are cultivated in India: namely, *Cinchona succirubra* (red bark), *C. calisaya* and *ledgeriana* (yellow bark), and *C. officinalis* (crown bark). The commonest species in Darjeeling is *C. ledgeriana*, and in Southern India *C. officinalis*. A hybrid form is also largely grown and yields a good bark. At the Government factories both cinchona febrifuge and quinine are made. Thanks to these factories, practically no quinine is nowadays imported for Government purposes.

THE REPORT OF THE GOVERNMENT CINCHONA plantations and factory in Bengal for 1917-18 stated that the total expenditure of all sorts from 1900-01 to 1917-18 is nearly Rs. 47,00,000 the total revenue Rs. 77,73,700 and the surplus Rs. 30,73,700. In addition to this surplus assets are 2,514 acres Cinchona at Rs. 5,78,057 3,142 acres afforested at Rs. 2,41,703; factory products in stock Rs. 4,53,532, bark and oil Rs. 40,000, or a total of over 13 lakhs, all at cost price. While the financial results may be claimed as satisfactory, still more so is the fact that the Department has so far met the great demand for quinine. During the three years 1915-18 over 192,000 lbs. have been issued a quantity exceeding the total issues for 29 years from 1887, when quinine was first made in the factory, to 1908. A great part of the extra demand has been for the armies, so that the department can claim, in so far as the supply of quinine has prevented the disablement of large numbers of men by malaria in fever-stricken regions, to have given valuable aid in the war. One of the most

far-reaching measures of modern times for the benefit of the health of the people of India has been Sir George King's system of having quinine, locally produced from cinchona, made up in 7-grain packets and sold (since 1896-7) for a quarter anna (one farthing) at every post office in India. This scheme has proved a commercial success, and has been of immense benefit to the inhabitants of fever-stricken tracts. In the year 1912-13, 10,694 lbs. of quinine were sold at the post offices.

Intoxicating Drugs.

Among the drugs which are of great medicinal value, but of which the misuse has been a source of crime and disease among the people of India, there are, in addition to cocaine, **Opium** (for details of the trade see article on opium) which is the oldest and the best known. A resolution of the Government of India, dated August 19, 1912, adopted the policy of suppressing all public gatherings for the purpose of smoking opium and of prohibiting all manufacture of opium smoking preparations save by an individual of a small quantity for his own private consumption. The form which legislation should take was left to the local Governments, provided that an assembly of three or more persons for the purpose of smoking opium should be made illegal. In adopting this policy Government distinguished between opium smoking and opium eating. "Opium, said the Resolution, as taken in moderation by the average Indian is eaten either as a mild stimulant, or as a prophylactic against malaria, or for the relief of pain or in the treatment of diabetes. It is in fact a household remedy for many ills, and it is safe to say that as a national habit the eating of opium is less injurious than is the consumption of alcohol in many other countries. Centuries of inherited experience have taught the people of India discretion in the use of the drug, and its misuse is a negligible feature in India life. These conclusions were accepted by the Shanghai Commission (of 1909) who, while they recommended the gradual suppression of the practice of opium smoking, refrained from advising the abandonment of the policy of regulation by which the practice of opium eating in the country has hitherto been successfully kept under restraint."

Next to opium and cocaine, the most common drugs are the three **hemp** products which are freely used throughout British India. The Indian hemp is a shrub growing wild in the hills and lower elevations, and cultivated in the plains. The leaves of the wild plants, collected and dried in the sun, constitute **bhang**, a sort of green tea, which is mixed with boiling water and drunk as an infusion. This has an exhilarating effect, followed by a feeling of intoxication. When the female plants are cultivated they exude a resinous juice, which causes the flowering tops to stick together. Collected under these conditions the tops are rolled in the hands or pressed under foot; the first process produces "round ganja," and the second "flat ganja." **Ganja** is a stronger form of hemp than bhang, and is used for smoking. The third form of Indian hemp is **charas**, the resinous secretion of the plant that develops when it is grown at certain altitudes. Large quantities of charas are produced in Chinese Turkestan, and enter India by way of Leh. This is sold over the northern part of the country, and used for smoking purposes.

The Cocaine Traffic.

The form of cocaine chiefly used in India is Cocaine Hydrochloride. This salt forms light shining crystals, with a bitterish taste, and is soluble in half its weight of water. The alkaloid cocaine—of which this is a salt—is obtained from the dried leaves of the Erythroxylon Cocaine which grows in Bolivia, Peru, Java, Brazil and other parts of South America. The leaves are most active when freshly dried and are much used by the Natives as a stimulant. Tea made from them has a taste similar to green tea and is said to be very effectual in keeping people awake. In India the Coca plant seems never to have been cultivated on a commercial scale. It has been grown experimentally in the tea districts of Ceylon, Bengal and Southern India and has been found to produce a good quality and quantity of cocaine. As the plant has not been seriously cultivated and as there is no possibility for the present of the drug being manufactured in India, no restrictions have as yet been placed on its cultivation.

Spread of the habit.—The cocaine traffic in India which seems to be reaching alarming proportion in spite of egislation and strict preventive measures is of comparatively recent growth; though it is impossible to estimate how widespread it was in 1903 when the Bombay High Court for the first time decided that cocaine was a drug included within the definition of an intoxicating drug in the Bombay Abkari Act. Since that date the illegal sale of cocaine in India has largely increased and the various provincial Excise Reports bear witness to the spread of the "Cocaine habit." The consumers of the drug, which is notoriously harmful, are to be found in all classes of society and in Burma even school children are reported to be its victims; but in India as in Paris the drug is mostly used by prostitutes or by men as an aphrodisiac. The habit has spread chiefly to those classes which are prohibited by religion or caste rules from partaking of liquor and the well known Indian intoxicating drugs.

Imports from Europe.—Cocaine and its allied drugs are not manufactured in India, but are imported from Germany, France, England and Italy. Most of the drug which is smuggled into India, comes from Germany and bears the mark of the well-known house of E. Merck, Darmstadt. This firm issues cocaine in flat packets of various sizes ranging from 1 to 3 ounces which are easily packed away with other articles and greatly favour the methods of smugglers. Owing to its strength and purity cocaine eaters prefer this brand to any other in the market. Restrictions on export from Europe have been under consideration for some time but as yet no international scheme devised to that end has been agreed upon.

Smuggling.—So far as the cases already detected show, the persons who smuggle the drug by sea from Europe and places outside India, into India, are chiefly sailors, stewards, firemen and sometimes engineers and officers of the Austrian Lloyd and Florio Rubattino S. S. Companies. The ports through which cocaine enters India are Bombay, Karachi, Calcutta, Madras, Marmagoa and Pondicherry. The main inland distributing centres are Delhi, Lucknow, Meerut, Lahore, Mooltan, Surat and Ahmedabad. Delhi especially is notorious for the cocaine trade. Great ingenuity is employed in smuggling cocaine through the Custom houses. It is packed in parcels of newspapers, books, toys and piece-goods and in trunks which have secret compartments. The retail trade in the towns is very cunningly organized and controlled. In addition to the actual retailers, there is a whole army of watchmen and patrols whose duty is to shadow the Excise and Police Officials and give the alarm when a raid is contemplated. Owing to the war and the consequent diminution of supplies the cocaine hawking trade has practically disappeared in Bombay. The largest seizures of cocaine made during the year 1916-17 were 11,655 grains by the Police Department 4,244 grains by the Customs and 851 grains by the Excise Department. Since the outbreak of the war attempts have been made to smuggle Japanese cocaine into Bombay.

Price.—The amount seized is either given to Hospitals in India or destroyed. It is no longer possible to buy cocaine from any betelnut seller as it was ten years ago, but scores of cases in the Police Courts show that the retail trade thrives, though to a diminished extent, in Bombay. High profits ensure the continuance of the trade. At present the English quotation is 33 shillings and 2 pence per ounce and the price as sold by licensed chemists in India is about Rs. 36 per ounce. Owing to the war and the consequent stoppage of illicit importations from Austria and Germany it is not possible to buy the smuggled drug from the wholesale dealers for less than Rs. 100 to 120 per ounce and when sold by the grain the price realized varies from Rs. 400 to 425 per ounce. These profits are further enhanced by adulteration with phenacetin and inferior quinine.

The law in regard to Cocaine.—This varies in different provinces. A summary of the law in Bombay is as follows: No cocaine can be imported except by a licensed dealer and importation by means of the post is entirely prohibited. The sale, possession, transport and export of cocaine are prohibited except under a license or permit from the Collector of the District. A duly qualified and licensed Medical practitioner is allowed to transport or remove 20 grains in the exercise of his profession; and as far as 6 grains may be possessed by any person if covered by a *bona fide* prescription from a duly qualified Medical practitioner. The maximum punishment for illegal sale, possession, transport, etc., under Act V of 1878 as amended by Act XII of 1912 is as follows: Imprisonment for at term which may extend to one year or fine which may extend to Rs. 2,000 or both and on any subsequent conviction imprisonment for a term which may extend to 2 years or fine which may extend to Rs. 4,000 or both. The law in Bombay has been further amended so as to enable security to be taken from persons who have been convicted of cocaine offences. The new Act also contains a section for the punishment of house owners who let their houses to habitual cocaine sellers.

INDIAN TOBACCO.

The tobacco plant was introduced into India by the Portuguese about the year 1605. As in other parts of the world, it passed through a period of persecution, but its ultimate distribution over India is one of the numerous examples of the avidity with which advantageous new crops or appliances are adopted by the Indian agriculturist. Five or six species of *Nicotiana* are cultivated, but only two are found in India, namely, *N. Tabacum* and *N. rustica*. The former is a native of South or Central America, and is the common tobacco of India. About the year 1829 experiments were conducted by the East India Company towards improving the quality of leaf and perfecting the native methods of curing and manufacturing tobacco. These were often repeated, and gradually the industry became identified with three great centres: namely, (1) Eastern and Northern Bengal (more especially the District of Rangpur); (2) Madras, Trichinopoly, Dindigul, Coconada and Calicut in Southern India; and (3) Rangoon and Moulmein in Burma. Bengal is the chief tobacco growing Province, but little or no tobacco is manufactured there. The chief factories are near Dindigul in the Madras Presidency, though, owing to the imposition of heavy import duties on the foreign leaf used as a cigar wrapper, some cigar factories have been moved to the French territory of Pondicherry.

The question of improving the quality of Indian tobaccos has received the attention of the Botanical section of the Agricultural Research Institute, Pusa, and three Memoirs have been published recording the results of investigations in that direction. The immediate problem at Pusa is the production of a good cigarette tobacco. Many attempts have been made in the past to introduce into India the best varieties of cigarette tobacco from America, but the results have been disappointing. It is now hoped to build up by hybridization new kinds of tobacco, suited to Indian conditions of growth, which possess in addition the qualities necessary to obtain a better price.

Mr. James McKenna in his recent report on "Agriculture in India" writes:—

"The ordinary Burman and Indian cigar has an increasing popularity—about 1¾ million pounds are exported—and exports increase: It is a cheap and a good cigar, but it is capable of improvement, principally by a better outer leaf or wrapper of finer tobacco. We should therefore aim at increasing the outturn of genuine Indian cigars, improved, as they can be, without loss of their individuality, by the selection of leaf, and at decreasing the imports of foreign cigarettes by producing tobacco suitable for this purpose. The present coarse varieties seem to meet the local taste and that of our main export markets, which are Aden and its Dependencies and the Far East. There is, however, no reason why these local varieties should not be brought to their highest perfection by selection or why improvements should not be possible in curing. The most pressing commercial problem, however, is to oust the foreign cigarette. This question has been taken in hand in Bengal and Bombay, where efforts are being made to establish exotics. These have met with only qualified success. We can only say, so far, that experiments continue, but whether they will prove commercially successful remains to be proved and indeed seems somewhat doubtful." That the process of ousting the foreign cigarette is well advanced may be seen from the latest report on the Maritime Trade of Bengal, which remarks "The cheap Indian-made cigarette continues in great demand, the largest supplying centre being Monghyr, where perhaps the most up-to-date factory in the world turns out incredible quantities daily. From the railway station for this factory no less than 10,632,000 lbs. were exported in 1916-17.

Exports.—The total export of tobacco in 1917-18 amounted to 21,864,000 lbs. valued at Rs. 51,01,000 compared with 29,612,000 lbs. valued at Rs. 52,97,000 in the previous year.

Imports.—Owing to the enormous demand for cigarettes for the Army imports in 1917-18 amounted to 3,491,000 lbs. compared with 1,731,000 lbs. the pre-war quinquennial average. Over 96 per cent. of the total imports came from the United Kingdom. Imports of cigars fell to 45,000 lbs. compared with 79,000 lbs. in the pre-war year 1913-14.

Tata Iron and Steel Co., Ltd.

The Tata Iron and Steel undertaking is the greatest of the modern industrial enterprises in India, and will rank with the large concerns of the kind in Europe and America. The gigantic project owed its inception to the genius and enterprise of the late Mr. Jamsetjee Tata, of the firm of Messrs. Tata Sons, Ltd. Before the formation of the Company, the best brains of Europe and America were utilised in examining into the possibility of establishing in India a great iron and steel industry on a paying basis, and no efforts were spared to render the investigation as thorough as possible. No less than Rs. 5,50,000 was spent in the investigation before Messrs. Tata Sons, Ltd., established to their satisfaction that such works could be erected in India with every reasonable prospect of success. The site eventually fixed upon was at Sakchi, a village in the Singhbhum District of Chota Nagpur, some two miles from the station of Kalimati on the Bengal Nagpur Railway. At the time of the Viceroy's visit to the Steel Works on the 2nd January 1919, Sakchi was renamed "Jamshedpur" after the late Mr. Jamshedjee Tata. The name of 'Kalimati" also is changed to "Tatanagar."

Within reasonable distance of Jamshedpur, which bids fair to become the Pittsburg of India, very large deposits of high grade iron ore were discovered in proximity to coal of a coking character suitable for the manufacture of pig iron at a very low figure. Two rich fields containing very large supplies of this ore were secured on suitable leases by Messrs. Tata Sons, Ltd., one situated in the State of Mourbhanj and the other in the Raipur District, the intention being to limit operations for the present to the Mourbhanj Hills, in which 7,000,000 tons of ore had been proved to exist on the lower ridges alone. Numerous analyses have proved this ore to contain on an average over 60 per cent. of metallic iron. The royalties payable under the leases, based on an annual output of 2,50,000 tons, average 2.4 annas per ton for the first 30 years and five annas per ton for the succeeding 30 years. These ore beds are some 40 miles by rail from the site of the Company's works.

Messrs. Tata Sons, Ltd., received from the Company in full settlement for the transfer of all mining rights, concessions, leases, etc., which they have acquired, and in full settlement of all expenses of investigation incurred by them prior to the formation of the Company, 20,000 fully paid-up Ordinary Shares of Rs. 75 each, equivalent to a payment of Rs. 15,00,000 and in addition a lump sum of Rs. 5,25,000 in cash. In addition to these payments the syndicate of gentlemen who were instrumental in the actual formation of the Company received as remuneration for their services, 1,300 fully paid-up Ordinary shares, equivalent to a payment of Rs. 97,500.

Jamshedpur Works.

The Company's works were originally designed for an annual output of 120,000 tons of pig iron, and the conversion of 85,000 tons into 72,000 tons of finished steel. The average imports into India of iron and steel of the classes which it was intended to produce amounted to approximately 450,000 tons per annum, so that the Company had at its doors a market largely in excess of its present productive capacity. On all ore sold as ore or exported, Messrs. Tata Sons, Ltd., are entitled to a royalty of 4 annas a ton. The Company further possesses considerable manganese properties at Ramrama in the Central Provinces, which have already been connected by rail with the Bengal Nagpur Railway and are a source of considerable revenue.

The following concessions were granted by the Government of India to the Company:—

(1) The purchase by the State of 20,000 tons of steel rails annually for a period of ten years, subject to the condition that the rails comply with the Government specification and that the prices be not more than the prices at which similar rails can be delivered *c.i.f.* if imported into India.

(2) A reduced rate of 1-15 of a pie per maund per mile, equivalent to .15 of an anna per ton mile, on all raw materials to the works, subject to a minimum mileage charge and to revision at the end of 10 years. The reduced rate has also been made applicable to all finished products and bye products despatched for shipment from Calcutta.

The entire cost of the original works, excluding the present extensions and inciusive of the purchase of mining rights, collieries, and all charges incurred in the construction of the town of Jamshedpur for the housing of the small army of the Company's employees, was put down at Rs. 2,40,00,000 and it was estimated that on the average prices ruling during the ten years 1896 to 1905 the manufacturing profit, assuming a sale of 35,000 tons of pig iron and 72,000 tons of finished steel, would, after meeting working expenses, depreciations, etc., amount to Rs. 24,15,000. This sum, it was calculated, would, after meeting interest on debentures and commission payable to the Managing Agents, enable the Company to pay the stipulated dividends of 6 per cent. on the preference capital, 8 per cent. on the ordinary capital, and 25 per cent. on the deferred capital, and leave a surplus of approximately Rs. 7,15,000 for distribution in equal shares between the ordinary and deferred capital. The above estimate of profits was made on the original capacity of the works, but since then two more open-nearth furnaces have been added and other improvements made in the plant, thus increasing the capacity of the works.

Finance.

The Company was registered on 26th August 1907. The Chairman of the Board of Director is Sir D. J. Tata, Kt. (Tata Sons, Limited), Specia Director. The following figures explain the financial arrangements of the Company, including provisions for great extensions sanctioned in 1916 and 1918. Capital authorized and issued Rs. 10,52,12,500. Ordinary Capital Rs. 2,62,50,000, Preference Capital Rs. 75,00,000 Second Preference Capital Rs. 7,00,00,000 Deferred Capital Rs. 14,62,500. Capital subscribed and called up on the 30th June 191 Rs. 2,56,66,960. Ordinary Capital Rs. 1,72,32,390 Preference Capital Rs. 75,00,000, Deferre Capital Rs. 9,34,570. In addition Debentur capital to the extent of Rs. 1,51,00,000, wa issued

Present Position.

The Company's original construction work was started in August 1907, and the construction and equipment of the work were regarded as practically completed by the end of June, 1912, at a total capital outlay on that date of Rs. 1,25,00.000. The blast furnaces worked well from the start and turned out pig iron of excellent quality. The steel furnaces gave a considerable amount of initial trouble, but these difficulties were completely overcome. The annual report of the Company, issued in October, 1918, showed a net profit during the year ending 30th June, 1918, amounting to Rs. 1,05,69,797 which with the sum brought forward from the preceding year's account, made a total sum of Rs. 1,08,86,678. Dividend was paid on Preference Shares for the twelve months ending 30th June 1918, at the rate of 6 per cent. per annum less income tax, on Ordinary Shares at the rate of 20 per cent. per annum and on Deferred shares 291 per cent. per annum, both free of income-tax.

Exploration in Mourbhanj State resulted in the location of eight deposits of iron ore within from 12 to 23 miles from the present mines, all being surface deposits which can be mined easily and cheaply. Test pits indicate the presence of about double the amount at the present mines and of at least equal quality. The magnesit deposits in Mysore State, are being worked at present, furnishing magnesite to the Kumardhubi Brick Works for being made into bricks for Jamshedpur also deposits of both iron ore and chrome ore have been located in this State, the chrome ore having been already exported to the works. The coal properties of the Indian Collieries Syndicate, Ltd., with all their rights, have been purchased. A Mining Lease has been taken out for coal in Korea State in the Central Provinces and prospecting licenses have been taken in several other districts for other minerals.

The Company's Employes.

The daily average number of employés of the Company in 1918 was 16,000 men and women. With the exception of a few European covenanted hands and local European employés, the entire labour is Indian. In addition to the labour employed at Jamshedpur mentioned above, the Company gives employment to approximately 8,300 labourers at its various mines and collieries. Various important welfare schemes for the benefit of the employés have engaged the mind of the Board of Directors and the Management. They have a hospital where the employes and outsiders are treated free of charge. The number of patients treated in this hospital for the year ending 31st December 1918 comes to about 220,783 out of whom 40 per cent. were outsiders. A new hospital has been designed for accommodating 200 beds and is under construction. The building to be put up at present will accommodate 100 patients and will include Administrative Building, General Ward Buildind, Dispensary and Out-patients' Ward, Laboratories, Baths, Zender Treatment and X-Rays, Nurses' Home, Maternity Ward, Private Patients' Ward, 4 Contagious Wards, Isolation Pavilion, Operating Theatre, Kitchens, Laundry, etc. There is a Convalescense Fund from the interest of which poor employés who have no money to support themselves during the period of convalescence are helped. As the want of a Convalescent Home is much felt, the Company is considering the scheme of building one on the top of a neighbouring hill. There are several schools at present in Jamshedpur:—(*a*) the Mrs. Perin Memorial School; (*b*) a Night School; (*c*) a Mechanics' School; (*d*) and a Girls' School. The Mrs. Perin Memorial School is a Middle English School. The average number of boys attending it at present is about 170. In the Night School, Chokras and other employés of the Company who are desirous of learning English and Mathematics get free tuition every evening for two hours. The number of employés attending the Night School is about 70. In the Mechanics' School, promising young boys of the mistri class employed at the Works are taught elementary Mathematics and Drawing with a view to make them more efficient in their work. A new up-to-date Girls' School has been opened. Very soon two Primary Schools will be opened which will admit free of charge both boys and girls. It has been proposed by the Government of Bihar and Orissa to start a Technological College at Jamshedpur, with the help of the Company.

With the valuable help of Mr. A. V. Thakkar of the Servants of India Society, a Grain and Cloth Stores has been opened for the purchase and distribution by the Company of grain and cloth among the employes at nearly cost prices. He has also been able to start a Co-operative Credit Society to help the workmen out of the clutches of local money-lenders.

The Company has also built a fine Institute for its employés, containing a concert hall, a restaurant, billiard and reading rooms, tennis courts, cricket and football grounds and a bowling alley. Any employé of the Company can become a member of this Institute without distinction of pay, colour or creed. For the convenience of employés living in G. Town the Company has recently built a branch Institute in that quarter.

The Company, realising the harmful effect of long hours on workmen, has recently introduced in all its operative departments, coke ovens, blast furnaces, steel works and rolling mills, a shift of 8 hours instead of the 12 hours which is the usual practice in Indian factories.

Extensions.

Owing to the increasing demand for the Company's products, extensions of the Company's works on a large scale are under contemplation whereby the works will be equipped to produce about five hundred thousand tons of finished Steel per annum. There will be a corresponding increase of coke ovens, blast furnaces, open hearth furnaces; also of the power plant and water supply.

Subsidiary Industries.

In connection with the scheme of extensions, arrangements have in some cases been almost concluded, and in others negotiations are proceeding, for the establishment of various manufacturing companies in the neighbourhood of

Jamshedpur, in order to take advantage of the close proximity of the Steel Works from which the raw materials required will be furnished. A list is given below of the various manufactures it is intended to produce :—

Steel tubes and pipes
Tin plate.
Enamelware of various descriptions.
Railway wagons.
Locomotives.
Spelter.
Wire shapes of various kinds, including fencing wire.
Nails, etc.
Machine Tools.
Agricultural Tools.
Galvanised Products.
Jute Mill Machinery.
Textile Mills Machinery.
Electrical Machinery.
Structural work.
Iron and Steel Castings.
Heavy Chemicals.
Sulphuric Acid.
Nitric Acid.
Fertilizers.

To meet the demands of its own extensions and to accommodate the above Subsidiaries, very large areas of land will be required, the acquisition of which has been sanctioned by Government. The Company will own about 24½ square miles after this new acquisition.

OILS AND OIL CAKES.

In 1917-18 exports of oil-seeds amounted to 457,700 tons, a decrease of 51 per cent. as compared with the previous year and of 68 per cent. with the pre-war average. The value of these exports amounted to Rs. 8,22 lakhs of which Rs. 18 lakhs represents an advance on the previous year's prices.

A pamphlet on the subject recently published by the Commercial Intelligence Department points out that it is both economically and industrially unsound for India to export her oil seeds instead of manufacturing the oils and oil cakes in India. It allows other countries to reap the manufacturers' profits and at the same time deprives Indian agriculture of the great potential wealth, as cattle-food and manure, contained in the oil cakes. An immense quantity of oil is, as a matter of fact, already manufactured in this country by more or less crude processes. Village oil mills worked by bullocks and presses worked by hand exist in all parts of the country and supply most of the local demand for oil. There has also been a great increase in recent years in the number of oil mills worked by steam or other mechanical power. These crush all the commoner oil seeds and development has been especially marked in the case of mustard oil, castor oil and groundnut oil. In spite of all this there has been a perceptible diminution in the export of oil from India, particularly of cocoanut oil and linseed oil, and an increase in the export of oil seeds, which is particularly marked in the case of copra and groundnuts. The situation created by the War has naturally led too much discussion of the possibility of developing on a large scale the existing oil-milling industry in India.

There are three difficulties with which any proposal to develop in India an **oil-milling industry** on a great scale is faced. In the first place, there exist high protective tariffs in European countries which encourage the export from India of the raw material rather than the manufactured product. Secondly, there is a better market for the oil cake in Europe than in India and the freight on oil seeds is less than the freight on cake. Thirdly, it is much easier and less expensive to transport oil seeds by sea than it is to transport oil. While this has been the position in the European markets, Indian made oils, other than cocoanut oil, have made enough headway in Eastern markets to suggest the possibility of a development of those markets.

The problem of finding a market for **oil cakes** is equally important. The value of oil cakes is much better appreciated in Europe than in India. The Indian cultivator is prejudiced against the use of machine-made cake as a cattle food or as manure because he considers that it contains less oil and therefore less nourishment than the village-made cake. He is therefore unwilling to buy it except at a reduced price. His prejudices on this point have no justification in fact since experts are agreed that mill cake is a better food for cattle than village-made cake. Even when the mill cake contains less oil than the village cake, there is still more oil in the cake than cattle can digest. The excess of oil in the village cake, where it exists, is a drawback and not an advantage to the use of the cake as food. A considerable amount of demonstration work has been done by the Agricultural Departments of Government in order to remove the cultivator's prejudices and there is said now to be an increasing demand for most classes of mill cake.

Calcutta Improvement Trust.

The Calcutta Improvement Trust was instituted by Government in January, 1912, the preamble of the Act by which it is founded running as follows:—"Whereas it is expedient to make provision for the improvement and expansion of Calcutta by opening up congested areas, laying out or altering streets, providing open spaces for purposes of ventilation or recreation, demolishing or constructing buildings, acquiring land for the said purposes and for the re-housing of persons of the poorer and working classes displaced by the execution of improvement schemes."

The origin of the Calcutta Improvement Trust must, as in the case of the corresponding Bombay body, upon which the Calcutta Trust was to a large extent modelled, be looked for in the medical enquiry which was instituted into the sanitary condition of the town in 1896, owing to the outbreak of plague. In consequence of the facts then brought to light, a Building Commission was appointed in April 1897, to consider what amendments were required in the law relating to buildings and streets in Calcutta. That Commission recommended certain alterations in the law, and further suggested that a scheme should be prepared for laying out those portions of the town which were sparsely covered with masonry. While unable to go into details, they recommended that in quarters newly laid out the roads and open spaces should occupy at least as much ground as the building areas. As regards existing evils, they thought that it was impossible to demolish any considerable portions of the City. All that could be done was to open out a number of wide streets and some open spaces. The Government of Bengal, when it proposed to give effect to the recommendations of the Commission, adopted, as the work to be done, a scheme for constructing and improving 15½ miles of roads which had been drawn up by the Commission. This scheme formed the basis of discussion till 1904, when a Conference was convened by Sir Andrew Fraser, then Lieutenant-Governor of Bengal. It was estimated that the Trust might in the ensuing 30 years have to provide for the housing of 225,000 persons, who would occupy 2,000 acres. The population of Calcutta proper, which includes all the most crowded areas, was 649,995 in 1891, and increased to 801,251, or by 25 per cent., by 1901. The corresponding figure according to the 1911 Census was 896,067.

The Conference of 1904 recognised that in view of the peculiar situation of Calcutta, which is shut in on one side by the Hooghly and on the other by the Salt Lakes, its extension in a regular zone is impossible. The Conference, after carefully considering the question, came to the conclusion that "arms" or "promontories" should be thrown out in five directions: on the north, north-east, east, south and south-east, and south-west. In these promontories it was easy to foresee that expansion would take place along the lines indicated by certain roads. It is for this reason that the Government of Bengal made the proposal that the Trust should have power to project roads to the outskirts of Calcutta. It was seen that strips of land lying along or in the neighbourhood of these roads should be acquired by or for the Trust and would be dealt with by them as model areas. In the remaining part of the extension, according to the Government's plan, the Trust would have no proprietary rights over the land, but they would administer the building regulations and by this means would secure that all houses erected by private owners were constructed on a standard plan and in conformity with sanitary requirements.

Legislation.

The recommendations of the 1904 Conference eventually took legislative form in a Bill introduced in the Bengal Legislative Council in August, 1910. This measure was built up on the recognition by the Government that the 15 miles road scheme only touched the fringe of the question of overcrowding and sanitation. The Bill, therefore, provided for a scheme of greatly enlarged scope. The amount of money required was roughly estimated at Rs. 8,22,00,000. It was recognised that a great deal more could be spent with advantage, and the figure was not put forward as representing the actual cost of any definite scheme, but as a rough estimate of what would be required for any scheme of wide and permanent utility. The total sum was divided into Rs. 500 lakhs for new roads, Rs. 172 lakhs for open spaces and Rs. 150 lakhs for housing and expansion. Of these sums Rs. 336 lakhs were to be recovered by recoupment, 50 lakhs were granted from Imperial revenues, and the remainder was left to be raised by loans. The sanction of the Secretary of State was obtained for the proposals generally on the understanding that the scheme of taxation would be for 60 years. The Legislative enactment, while based on these calculations, does not actually refer to any limit of expenditure. But the Act provides a special system of taxation for the service of the loans, amounting to Rs. 436 lakhs, involved in the scheme. For this service an annual revenue of 19·65 lakhs was required and to this have to be added 1·25 lakhs for working expenses and contingencies, bringing the total up to 20·90 lakhs. To provide this revenue the Act provides for the levy of special taxes as follows:—

A two per cent. stamp duty on the value of all immoveable property transferred by sale, gift or reversion of mortgage;

A terminal tax of one anna on every passenger by rail or steamer arriving in the city of Calcutta; this is not to be levied on passengers from within a radius of 30 miles of Calcutta;

A customs and excise duty, not exceeding two annas per bale of 400 lbs., on raw jute;

A two per cent. consolidated Corporation rate; and

An annual Government grant of a lakh and a half.

The Act provides for the appointment of a whole time chairman of the trustees and the membership of the Trust was fixed at eleven, part of the members being nominated by Government and others elected by local bodies whose interests are most nearly concerned,

The following are the present Board of Trustees :—The Hon'ble Mr. C. H. Bompas, I.C.S., *Chairman;* The Hon'ble Mr. C. F. Payne, I.C.S., Chairman of the Calcutta Municipal Corporation (*ex-officio*); The Hon'ble Raja Reshee Case Law, C.I.E., elected by the Corporation; The Hon'ble Rai Radha Charan Pal, Bahadur, elected by the Ward Commissioners; Mr. J. P. Wyness, elected by the Commissioners appointed under Sec. 8 (2) of the Calcutta Municipal Act, 1899; Mr. W. K Dods, elected by the Bengal Chamber of Commerce; The Hon'ble Rai Sitanath Rai Bahadur, elected by the Bengal National Chamber of Commerce; Sir R. N. Mookerjee, K.C.I.E.; Sir F. H. Stewart, Kt., C.I.E.; The Hon. Mr. A. Birkmyre and Raj Annada Prosad Sarkar, Bahadur, appointed by the Bengal Government.

The Board and their Work.

It was impossible to settle in advance the exact projects to be undertaken by the Trust. All details of these were, therefore, left to be worked out by the Trust after its constitution, Government exercising control by having all the individual schemes sent to them for approval before execution. The Trust did not enter on a virgin field. The Municipal Corporation had previously dealt in some measure with the problems they were appointed to solve and the Trust started work with the initial benefit of this previous labour. Thus, the Corporation had aligned many roads and this work was useful to the Trust, though in some cases modifications were necessary.

The work upon which the Trust are now definitely embarked may be divided into three classes as follows :—

Many parts of Calcutta are over-crowded with buildings and ill-provided with roads. These areas are to be re-arranged both on the ground of sanitation and for convenience of traffic;

Population will continue to throng into the overcrowded parts unless it can live on the outskirts and at the same time have speedy access to the business centres of the town. Quick traffic can only take place along broad roads. These are almost wanting in Calcutta. The construction of broad roads will at the same time ventilate the overcrowded parts of the town and it has been recognised from the outset that the construction of broad roads running both north and south and east and west will thus secure a double object;

There is the question of providing for the population displaced by improvements, and still more important of providing for the natural growth of population by laying-out roads and building sites on sparsely populated areas on the outskirts of the town. When persons of the working class are displaced or likely to be displaced the Trust can build dwellings for them if private enterprise does not undertake the work.

Engineer's Survey.

The Trust perceived at once that the problem of providing improved traffic facilities for Calcutta and its suburbs must be dealt with as a single problem and by a single mind. The first duty set by the Trust to their chief engineer was, therefore, to prepare a scheme of main roads of primary importance. The chief engineer Mr. E. P. Richards, M.I.C.E., &c., devoted his whole attention to this task and his report was issued early in 1914. Mr. Richards' report, which was accompanied by maps and numerous photographic illustrations, made a volume of 400 closely printed foolscap pages. He found Calcutta "a city which is in a very much more than ordinary bad way", and early discovered the serious fact that "the Calcutta Improvement Act of 1911 was almost useless for the great task set to the Trust". The Trust was not constituted under a Town Planning Act but only under a local Housing Act, so that "Calcutta and her suburbs cannot possibly be jointly planned or controlled, or be moderately improved, under the existing Improvement Act." Mr. Richards' report deals with the general conditions and needs of the city and the general policy of reform, with the general legislative and financial aspects and with the main programme of work. He discusses the Calcutta of to-day, showing the chief faults as to which improvements are required. A comparison is made between Calcutta and other cities, by way of illustrating Calcutta needs, and in this manner finance, roads and streets per square mile, road and street widths, percentage of open spaces, tramway mileage per head of population, the status of the city as a port, and so on, are fully dealt with. An important chapter deals with the Calcutta slums and makes recommendations as to what should be done in regard to them. Another chapter discusses the general problem of city improvement and another is devoted to suburban planning and developments.

Improvement Schemes.

The Engineer submitted early in 1915 an interesting report on the widening of Howrah Bridge. Meanwhile, the Board undertook certain improvement schemes which would not be interfered with by any larger schemes adopted later. The Board also embarked on a re-housing scheme with a view to provide accommodation for persons likely to be displaced by the improved schemes under preparation. The buildings designed resemble those erected by the Bombay Improvement Trust. The scheme was sanctioned by Government in August, 1912, but its execution has proved more expensive than was anticipated, mainly owing to the rise in the price of building materials. The following paragraph from the Calcutta Improvement Trust's first annual report shows the standard according to which they regard their re-housing plans :—

"The housing problem in Calcutta is of supreme importance; the figures of the last census show that much of the improvement in the health of Calcutta is only apparent; the sanitary measures of the Corporation result in the removal of bustees and the population which occupied the bustees does not find healthier accommodation in the same locality but moves on to even more insanitary bustees in the suburban wards or in the adjacent suburban municipalities. The Board do not anticipate nor do they desire, that the

chawl should become the usual dwelling for the poor of Calcutta, but it may be suitable to some classes of its heterogeneous population, and especially to those who come here for work, leaving their families behind. It is very difficult to see what other class of building can be erected by the capitalist where land costs more than Rs. 600 a cottah. On really cheap land it is possible that good results could be obtained by arranging for the construction of sanitary bustees, the Board merely laying-out and draining the site and controlling the class of hut erected." The Board undertook the erection of three blocks of buildings as an experiment. The cost of the land worked out at Rs. 832 a cottah. It is recognized in England that the working classes cannot profitably be housed on land costing more than £300 an acre, or Rs. 75 a cottah. There will, therefore, be a loss on the Calcutta experiment, as was anticipated by the Board from the outset. "It appears, therefore," say the Trustees in their 1914 report, "that the buildings would show a fair return of capital if the rooms in the two upper storeys were let out at Rs. 6 a month, those on the ground floor at Rs. 5 a month and the shops at Rs. 10."

The Board believed the buildings to be much cheaper than anything of the kind hitherto erected in Calcutta, and applications received showed that "there would apparently be no difficulty in filling a building with tenants of the Bengali middle class, if the whole building or the two upper storeys of each block were exclusively reserved for their use. The Board, however, in their 1914-15 report, stated that they "consider that it is most important to ascertain what rent can be paid and what accommodation is required by the artisan and labouring classes. They have, therefore, decided to let the rooms at lower rates to artisans and labourers and if the buildings once become popular, it will doubtless be possible to raise the rents at a later period."

A year's experience on these lines showed that the buildings were popular, though they did not become fully occupied, and the rent recovered gave a return of 8 per cent. on the capital expenditure. The Trust in their next report said that one reason why the dwellings were not fully occupied was probably the fact that in the search for cheap land the Trust placed the buildings too near the boundary of the Municipal Corporation area. "People of the poorer classes who are willing to live so far from the centre of Calcutta generally prefer to cross the boundary into Maniktala Municipality, which is only a hundred yards away and where rent and rates are less, though the sanitary conditions are deplorable". The Trust find reason to believe that similar buildings near the centre of Calcutta would let at more remunerative rates. Meanwhile it was decided to admit tenants of other than the working classes and this led to an immediate inrush of petty clerks and students. This class of tenants are still admitted and come in freely.

The Trust's programme of improvement is constantly undergoing development, but works were greatly hampered during the year under review by war conditions.

It was estimated in the Joint Report of 1913 that the cost of land required for the roads in the City proper, would be

Gross	..	..	..Rs. 7,00 Lakhs.
Nett	..	..	.. ,, 3,27 ,,

The estimates for the roads now proposed amount to

Gross	..	..	..Rs. 10,35 Lakhs.
Nett	..	..	.. ,, 3,25 ,,

BOMBAY IMPROVEMENT TRUST.

Bombay is an island twelve miles long, but very narrow and containing only 22 square miles altogether, but in the city, occupying little more than half the island, there lives a population enumerated at 972,892 and actually totalling over a million. Bombay is, in point of population, the second city of the British Empire. Seventy-six per cent. of its million people live in one-roomed tenements. Imagine the terrible conditions of overcrowding and lack of sanitation which these facts imply and you have the reason why the severe onset of plague eighteen years ago led to the formation of the Improvement Trust, for the special purpose of ameliorating the sanitary condition of the city. Plague was imported into India from the Far East and was first discovered in Bombay in 1896. There was a great panic among the population. Every house had its victims, most persons attacked died. There was a general flight of the population to the country districts. It is estimated that nearly half a million so fled. Grass grew in the principal streets. These circumstances directed the attention of the authorities, as nothing else could have done, to the problem of bringing the development and housing arrangements of the city into line with modern requirements. It was at once recognised that the task was too great for the Municipality, and a special body, termed the Trustees for the Improvement of the City of Bombay, was appointed. It consists of 14 members, of whom four are elected by the Municipality and one each by the Chamber of Commerce, the Millowners' Association and the Port Trust, and the balance nominated by Government, or sit *ex-officio* as officers of Government. The Board is presided over by a whole-time chairman (who has hitherto always been either a covenanted civilian or an officer of the Public Works Department) and he is also head of the executive. The present chairman and members of the Trust are as follow :—

Chairman—

Mr. J. P. Orr, C.S.I., I.C.S., J.P.

Ex-officio Trustees—

Maj.-General W.C. Knight, C.S.I., C.B., D.S.O., A.D.C., General Officer Commanding Bombay District.

Mr. W. C. Shepherd, I.C.S., J.P., Collector of Bombay.

Mr. P. W. Monie, I.C.S., J.P., Municipal Commissioner for the City of Bombay.

Elected by the Corporation—

Sir Bhalchandra Krishna Bhatawadekar, Kt., L.M., J.P.

The Hon. Sir Dinsha Edulji Wacha, Kt., J.P.

The Hon'ble Mr. Chunilal V. Mehta J.P.,

Mr. Cowasji Jehangir Readymoney, O.B.E., J.P.

Elected by the Chamber of Commerce—

Mr. A. M. Tod, J. P.

Elected by the Port Trustees—

Mr. G. W. Hatch, I.C.S., J.P.

Elected by the Millowners' Association—

Sir Sassoon David, Bart., J.P.

Nominated by Government—

Mr. A. H. Whyte, J.P.

Sir Lawless Hepper, Kt., J.P.

The Hon. Mr. Lalubhai Samaldas Mehta, C.I.E., J. P.

The specific duties of the Trust are to construct new and widen old streets, open out crowded localities, reclaim lands from the sea to provide room for expansion, and construct sanitary dwellings for the poor.

The Sanitary Problem.

Bombay city grew on haphazard lines, houses being added as population poured in with the growth of trade and without any regard to town planning or the sanitary requirements of a great town. The price of land was always comparatively high, owing to the small area of the island, and while the builder had only one object in view, namely, to collect as many rent paying tenants as possible on the smallest possible piece of land, there were no proper restraints to compel him to observe the most ordinary rules of hygiene. The result was the erection of great houses, sometimes five and six storeys high, constituting mere nests of rooms. There was no adequate restriction as to the height of these chawls, or the provision of surrounding open space, so that the elementary rules as to the admission of light and air went unobserved and the house builder invariably erected a building extending right up to the margins of his site. Consequently, great houses accommodating from a few hundred to as many as four thousand tenants were built with no more than two or three feet between any two of them and with hundreds of rooms having no opening at all into the outer air.

The Trust has practically reconstructed large areas on modern sanitary lines, but the old municipal by-laws having unfortunately remained quite inadequate for the due control of private building operations by the Municipality, the Trust have spent millions sterling of public money in sweeping away abuses, while unscrupulous landlords, still unchecked, added in the same old manner to the insanitary conditions of the place. Thus, the Trust acquire and destroy insanitary houses on a certain area and lease the sites and permit new houses to be built on them subject to the reservation of a certain breadth of open ground round the edges of the site to provide for the necessary angle of light and air for the lower rooms of the new building. But bordering on this area there will be old houses that were not acquired as part of the improvement scheme and the municipal by-laws have allowed the owners of these to increase their height by one or more storeys without regard to the fact that they were thus undoing the very work of providing for the admission of light and air upon which the Trust had just poured out money. The private landlords have taken the fullest advantage of the loophole. The amendment of the Municipal by-laws so as to cure such abuses has been under discussion by the Municipal Corporation for many years and improved by-laws have been prepared. They are still under consideration by the Municipal Committee.

Finance.

The work with which the Trust was charged was bound to prove unremunerative, with the exception of reclamations from the sea, and at the outset, therefore, certain Government and Municipal lands were vested in the Trust, the usufruct of which it enjoys, and the Trust at the outset received a contribution from municipal revenues not exceeding 2 per cent. on the rateable value of the property assessed for taxation. In practice, the works are financed out of 4 per cent. loans, which are guaranteed by the Municipality and the Government, and the revenue of the Trust is used to meet interest and sinking fund charges. The Trust, proceeding on these lines, found itself, in 1910, at the end of its resources. When the Trust was constituted it was estimated that the usufruct on the public land vested in it would represent a contribution of Rs. 96,00,000 (£640,000) from the general taxpayer. But in practice this was reduced to less than Rs. 43,00,000 (£286,666). The Trust found itself with unpledged resources estimated at only Rs. 16,00,000 (£106,666). The Government of India came to its assistance with a cash grant of half a crore of rupees (£333,333), given out of a budget surplus. Special legislation was carried through the Bombay Legislative Council in 1913 to increase the advantage of the Trust from Provincial and Municipal appropriations, and legislative measures were initiated to enable the Trust to raise money by special local taxation in Bombay. The cautious estimate of Rs. 16,00,000 also proved to have been below the mark. In the years following 1910, when the estimate was made, there was an improvement in the Trust's revenue, so that in 1913, after the amendment of the financial clauses of the Act and the grant of 50 lakhs by the Government of India, and in spite of important additions to the Trust's programme, the triennial financial forecast showed that the margin for expansion had increased to Rs. 95 lakhs. Inasmuch as the whole of this sum was required for completion of the Eastern Avenue, it was still necessary that the Trust should be provided with further funds for direct expenditure on improvement schemes. To this end a Bill was introduced into the Bombay Legislative Council on 16th December, 1913, providing for the

levy of a surtax in stamp duty on conveyances of property in Bombay and for the payment of the nett proceeds to the Trust. The Municipal Corporation, however, protested against the raising of the necessary funds at the expense of the property owners of Bombay and suggested, as they and the Trust had already suggested in 1911, that an export duty on bales of cotton exported from Bombay should be levied instead. Government announced at the March, 1914, meeting of the Legislative Council that the Bill would be held over pending consideration of this suggestion. The matter has not yet proceeded further.

Meanwhile, the 1916 triennial financial forecast shows further important circumstantial improvement in the Trust's position, the result being to establish that after making full allowance for the worst probable effects of the war and full provision for all sanctioned schemes to the end of September, 1916, including the two Parel road schemes, which it had been supposed would exhaust the Trust's financial resources, the Trust have a margin of Rs. 122 lakhs for expansion of their programme. The main point for notice is that the new forecast shows the total loss on the16 schemes included in the 1913 forecast as Rs. 309 lakhs against the corresponding figure of Rs. 352 lakhs estimated in 1913, an improvement of Rs. 43 lakhs, or 12 per cent., this improvement being for the most part made up of small items in several schemes:

"The salient features of the Trust's present sanctioned programme of 41 schemes may be summarised as follows:—Capital spent on acquisition and works gradually rises from 693 lakhs at end of 1917-18 to 969 lakhs at end of 1944-45. Debt gradually rises from 568 lakhs in 1917-18 to 788 lakhs in 1924-25. Annual interest and sinking fund charges thereon gradually rise from 25,62 lakhs in 1917-18 to 35'85 in 1925-26. From 1959-60 they gradually fall as loans are paid off till they vanish in 1984-85. Permanent ground rents gradually rise from 12,84 lakhs in 1917-18 to 30'33 lakhs in 1946-47. Nett annual revenue from estates rises from 24,52 lakhs in 1917-1918 to 31'33 lakhs in 1956-57. From 1998-99 onwards the nett revenue gradually falls as scheduled lands revest in Government and the Municipality till when in 2029-30 none such remains with the Trust it reaches 23'11 lakhs. Margin for expansion of programme, Rs. 122 lakhs."

The Trust in November, 1915, carried a recommendation of their Improvements Committee to ask their solicitors to draft an amendment to the Improvement Trust Act which would give the Board powers, similar to those provided for in the English Act for the housing of the working classes, to acquire parts of houses, to remove obstructive houses, and to levy betterment contributions from houseowners who benefited by such Improvements, the aim of this amendment being to enable the Trust to deal with areas "represented" for improvement by the Municipal Corporation without the great expense of total demolition procedure. A draft from the solicitors is still under consideration by the Trust.

The following are some details of the Bill to amend the City of Bombay Improvement Act, which, as just mentioned, was passed by the Provincial Legislature in Jan. 1913. The main object of the Bill was to simplify the financial arrangements between the Government, the Municipality and the Trust and make them more favourable to both the local bodies. Under the old Act, as already mentioned, the annual municipal contribution to the Trust was an indefinite sum limited by a maximum of 2 per cent. on the municipal assessments of the year. Under the Amended Act the municipal contribution is a definite share of the year's general tax receipts, approximating to 2 per cent. on assessments and subject to no maximum, and the Trust keep their profits for their own use. Under the original Act, the Trust had from 1909 onwards to pay to Government and the Municipality 3 per cent. per annum as interest on the schedule value of the Government and municipal lands vested in them, while Government and the Municipality were at liberty to resume any unleased, vested lands for public purposes without paying compensation, except in respect of capital spent by the Trust in improving them. Under the amended Act the Trust have no interest to pay, and Government and the Municipality must, on resuming vested lands, pay the Trust their full market value. There are other modifications of the old arrangements, similarly making for the financial benefit of the Trust. The new Act makes the Municipality the reversioners of the Trust's assets and liabilities. Apart from finance, the new Act contains important new sections under which the Trust are empowered to co-operate with employers of labour for the housing of the working classes by constructing chawls for their employés and leasing them to the employers at a rent calculated so as to yield to the Trust in the course of the 28 years of the lease the capital sum spent in the scheme, plus interest payable on the debentures by which the capital was raised, the chawls then becoming the property of the employers. The Trust are now corresponding with several millowners about schemes under these sections, and one set of chawls consisting of 5 out of 8 blocks has been completed for the Spring Mills.

Plan of operations.

The work of the Trust, so far as it has gone or is planned, can be divided into two parts. The first concerned the immediate alleviation of the worst burdens of insanitation and the second consists of opening up new residential areas. The Trust began by attacking the most insanitary areas. Two broad roads, running due east and west, were cut through the worst parts of the city, sweeping away a mass of insanitary property and admitting the healthy westerly breezes to the most crowded parts of it. These thoroughfares are known as Sandhurst-road and Princess-street. They are now practically completed, and the greater parts of them are already settled under the new conditions, with sites on both sides of them disposed of on long leases and many new buildings built and occupied. Meanwhile, large areas of good building land, lying idle for want of development works, have been developed and brought on the market, sold at remunerative rates and largely built upon. Instances of this development are

the Chaupati and Gamdevi estates, the land overhung by Malabar Hill, between it and the native city. These were cut up with fine new roads and are now nearly covered with modern suburban dwellings. Two of the most insanitary quarters in the midst of the city have been levelled to the ground and rebuilt in accordance with hygienic principles. Sanitary chawls have been built for about 20.000 persons. So much for the first phase of the Trust's labours.

The second phase, arising gradually out of the first and advancing along with its later stages, consists of the development of a new suburban area in the north of the island, beyond the present city, and the construction of great arterial thoroughfares traversing the island from north to south. The latter undertakings were originally known as the eastern and western avenue schemes, but the cost of land is rising so rapidly throughout the city, and the expense of new works is accordingly growing so heavy, that the western avenue has had practically to be abandoned and modified improvements of existing highways from south to north, on the western side of the city, substituted for it. The eastern avenue will run from the back of Crawford Market, the northernmost limit of the modern commercial city, directly north to the northern end of Suparibagh-road, near the western entrance road to old Government House, Parel, and have a width varying from 100 to 120 feet. It is divided into three sections. The first, starting from Crawford Market and reaching to Pydhonie, is already in the hands of the engineers for execution. The second, for which Parel-road requires widening, has been sanctioned by Government and the Improvement Trust are now acquiring the necessary properties for carrying it out.

Beyond the northern end of the Eastern Avenue, the north-east portion of the island, extending some three miles, consisted until recently of swampy rice lands, interspersed with bits of jungle and small hills and a few building areas. The Trust have acquired the whole area. A broad thoroughfare has been laid through the centre of it, with other roads connecting the outlying parts with the central road and with the railway stations. Some of the hills have been levelled and the material from them used to fill the low-lying parts of the estate. Development some time ago reached the stage of readiness for building in the half of the scheme nearest the city, and the Trust are now devoting their attention to facilitating private enterprise in this direction. Some building has already been commenced. The suburbs will probably become largely residential for people whose daily pursuits take them to the southern city, but its chief use will be for those whose avocations employ them in the large new port extension which the Port Trust are carrying out at the north of the present port and where the new cotton green and grain yards will be situated. The Port Trust have reclaimed 596 acres of land from the north of the harbour, at a cost of £1,833,333, and the whole of the export trade of the port will be concentrated in this new area and in that adjoining it, at Mazagaon and Sewri.

Statistics.

The following are some statistical details of the progress of the Trust's operations. By the end of 1917-18 the Board had raised Rs. 568 lakhs (face value, nett receipts being Rs. 560 lakhs) by loans and their total capital receipts including 50 lakhs received from the Government of India in 1911 and 4 lakhs from the Government of Bombay in 1913, amounted to Rs. 734 lakhs, out of which they had spent 42 lakhs on improvement of Government and Municipal lands temporarily vested in them, Rs. 648 lakhs on their own acquired estates and 3 lakhs on their office building. The following table, taken from the Trust's official report shows the extent of the development operations carried out by the Trust up to the end of the official year 1917-18 :—

Developed Land.	Sq. yards in thousands
Permanently leased	1,194
Chawl sites	80
Yet to be permanently leased ..	441
Remainder roads, open spaces, etc.	965
Total ..	2,680

Rent of permanently-leased area ..	.. Rs	16·2 lakhs
Area of undeveloped land in thousands of square yards		4,359
Cost of acquisition	.. Rs.	238 lakhs

The disposal of plots on the Trust's newly developed estates is now progressing at a favourable rate. Practice shows that for obvious reasons the disposal of plots proceeds most slowly when an estate first becomes available for leasing to the public. When the first plots have been taken up and house building begins to assume definite proportions the remaining sites pass off without difficulty. Both in number and in area the plots disposed of during the year 1917-18 far exceeded those disposed of in any previous year. In point of value the total fell below that of 1916-17, but this is accounted for by the fact that but few plots situate in the city proper were available for disposal. Great progress was made on the Dadar Matunga estate where 105 plots having an area of 91,000 square yards were disposed of. The last of the remaining plots on the Colaba Reclamation was let. In the three estates in which there were the largest transactions the value per square yard of the land disposed of was as follows :—

	Maximum. Rs.	Minimum. Rs.	Average Rs.
West Agripada	20	9	13½
Dadar-Matunga	17	7½	11
Suparibag ..	44	10½	18

This improved demand for the plots on the Trust's residential estates is a very satisfactory and encouraging feature. It seems to indicate that the public are at least beginning to appreciate the advantages of the Trust's method of laying out their estates with a prescribed margin of land to be kept permanently free of building on each plot, in such a way that each lessee gets the benefit of the open spaces in his neighbour's plot as well as those in his own.

By the beginning of 1917-18 completion certificates had been issued for 426 buildings on the Trust Estate, exclusive of Police chawls and Trust chawls. In 1917-18 certificates were granted for 34 new buildings.

The Working Classes.

The average total population in the Trust chawls and semi-permanent camps was 19,044 in 1917-18. The total rents of 4,796 rooms in the Trust chawls at the maximum rates works out to Rs. 2,81,112 per annum. The maximum for 1917-18 was Rs. 2,77,544 or 79·56 per cent. of the total recoverable Rs. 2,80,742 of the year plus previous arrears of Rs. 6,242. The difference between Rs. 2,81,112 and Rs. 2,80,742, *viz.*, Rs. 370 is due to vacancies. The percentage of outgoings to gross chawl revenue is found to be approximately 31·88% (against 32·86% in the preceding year) this proportion being higher than in the case of private chawls mainly because private owners spend far less than the Board on the sanitation of their chawls. On the basis of the maximum annual rent of Rs. 2,81,112 and outgoings at 31·88% the net annual income of permanent chawls works out to Rs. 1,91,494 or 449% on the cost of chawls (including value of land) amounting to Rs. 42,61,865 on which the Board pay annual interest and sinking fund charges at 4·61% amounting to Rs. 1,96,472 which is Rs. 4,978 more than the net annual income as worked out above. The average population of which was 15,671 during 1917-18.

The death-rate in the Trust's permanent chawls has always been considerably below the general death-rate in the vicinity. The smallest one room tenement on the Trust Estate is large enough for a family of five.

A New Method.

A further development of method in dealing with insanitary areas is now in prospect. It has already been recognised that estimates on the old wholesale demolition lines would be prohibitively expensive for the large "represented" areas remaining to be dealt with, owing to the constantly increasing cost of property and work, and could benefit only small areas surrounded by larger areas in which insanitary conditions are always going from bad to worse with the extension of building operations, under the lax Municipal by-laws already referred to. It is recognised that what is wanted is some general scheme of improvement that can be applied all over the city and some means of putting an immediate check to the spread of further insanitary evils through the weakness of the by-laws, especially in relation to the lighting and ventilation of one-roomed tenements. The Trust officers have devoted much time to studying this question and the chairman some time ago propounded a scheme by which all inadequately lighted and ventilated rooms in Bombay might be closed gradually and houseowners required, with some assistance from public funds, to reconstruct their houses, so that all rooms in them used for dwellings might have sufficient light and air. The scheme attracted the attention of Government, who appointed a representative committee to consider the new plan. This committee submitted a report generally approving the suggestions but the Corporation to whom the report was sent by Government for consideration have not yet come to any decision about it.

During the past two years there has been an important movement towards the establishment of co-partnership housing societies on the Board's Estate and the Board regard the new departure as one deserving every encouragement at their hands, especially in connection with the disposal of land in their Garden Suburb in the north of Bombay island.

The one co-operative housing society which has got to work in Bombay has proved a great success. It is the Saraswat Co-operative Housing Society who have erected five buildings on the Trust's Gamdevi Estate housing 42 families on the well-known Co-partnership Tenants system.

The Indian Ports.

The administration of the affairs of the larger ports (*Calcutta, Bombay, Madras, Karachi, Rangoon and Chittagong*) is vested by law in bodies specially constituted for the purpose. They have wide powers, but their proceedings are subject in a greater degree than those of municipal bodies to the control of Government. Except in Calcutta, the elected members are fewer in number than the nominated members. At all the ports the European members constitute the majority and the Board for Rangoon consists wholly of European members.

The income, expenditure and capital debt, according to the latest figures obtainable from the Department of Statistics (India) of the five principal ports managed by Trusts (Aden is excluded from the tables) are shown in the following table :—

—	Income.	Expenditure.	Capital Debt.
	£	£	£
Calcutta ..	1,048,229	1,042,116	7,203,779
Bombay ..	1,187,064	1,061,415	10,204,383
Karachi ..	316,871	258,101	1,733,569
Madras ..	179,498	172,313	872,004
Rangoon ..	300,846	266,608	1,990,800

In the Department of Statistics, India, the following returns have been compiled showing the ratios borne by the income and the expenditure of each port to the total income and the total expenditure, respectively, of all the chief Indian ports during the year 1916-17, the latest period for which the returns are obtainable :—

—	Income per cent.	Expenditure per cent.
Calcutta	34·3	36·8
Bombay	38·8	37·5
Madras	5·9	6·1
Karachi	10·4	9·1
Rangoon	9·8	9·4
Chittagong	0·9	1·0

The latest return of the Department of Statistics shows that in the ten years ending 1916-17, the income and expenditure of each port have increased as shown in the following table. The total income of all the ports has increased in the decade by 83·9 per cent. and the total expenditure by 72·9 per cent. :—

—	Increase per cent.	
	Income.	Expenditure.
Calcutta	43·5	45·0
Bombay	149·6	139·3
Madras	155·9	68·1
Karachi	48·5	30·3
Rangoon	89·0	74·5
Chittagong	87·8	38·7

The war has affected the trade of all the ports in a manner which makes it useless to continue comparisons up to date on the lines of the foregoing figures.

CALCUTTA.

The Commissioners for the Port of Calcutta are as follows :—

Appointed by Government.—The Hon'ble Mr. C. J. Stevenson Moore, C. V. O., I.C.S., Chairman, Mr. S. C. Williams, Offg. Vice-Chairman.

Elected by the Bengal Chamber of Commerce.—Mr. C. F. Beadel (Becker Gray & Co.); Mr. S. G. L. Eustace (Messrs. Kilburn & Co.); Mr. L. Edwards (Messrs. Andrew Yule & Co.); The Hon'ble Mr. W. E. Crum, O.B.E. (Messrs. Graham & Co.); Mr. A. Cameron (Mackinnon Mackenzie & Co.); The Hon'ble Mr. F. W. Carter, C.I.E., C.B.E. (Messrs. Turner Morrison & Co.).

Elected by the Calcutta Trades Association.—Mr. W. H. Phelps (William Heath).

Elected by the Bengal National Chamber of Commerce.—Babu Nibaran Chandra Sircar (N. C. Sircar & Sons).

Elected by the Municipal Corporation of Calcutta.—The Hon'ble Raja Reshee Case Law, C.I.E.

Nominated by Government.—Mr. A. M. Clark, (Agent, Bengal Nagpur Railway); Sir Robert; S. Highet, Kt. (Agent, East Indian Railway); Mr. E. A. S. Bell (Agent, E. B. Railway); Mr. C. W. E. Cotton, I.C.S. (Collector of Customs); and Captain M. W. Farewell, C.I.E., R.I.M. (Captain Superintendent, Kidderpore Dockyard).

The principal officers of the Trust are—

Secretary.—Mr. J. McGlashan, M. INST. C.E. (Offg.)

Deputy Secretary.—Mr. T. H. Elderton (on leave).

Traffic Manager.—Mr. T. J. McCloughin.

Chief Accountant.—Mr. N. G. Park, C.A.

Chief Engineer.—Mr. J. Scott, M. INST. C.E.

Deputy Conservator.—Commander E. A. Constable, R.N.

Consulting Engineer and London Agent.—M. J. Angus, M. INST. C.E.

The operations of the Trust have seriously been affected by the war, as owing to the position of Calcutta, there has been practically no military traffic to be handled and the volume of imported goods and of coal exported has shrunk very largely, owing to the shortage of tonnage from unrestricted submarine attack on all vessels, firstly, by the loss of vessels actually engaged in trade with Calcutta, secondly, by the general diversion of ships to the Cape route with a consequential reduction in the number of voyages made by each, and thirdly, by the withdrawal of vessels from Eastern waters to meet the losses of tonnage incurred in Europe. A further loss of trade occurred from the restriction on the import of Burma rice into Calcutta, which the Government of India found it necessary to impose in order to relieve the heavy demands on rolling stock. The following table illustrates the effect of the war :—

Year.	Docks.		Jetties.		Nett Tonnage entering the Port.
	General exports.	Coal exports.	Imports	Imports.	
	Tons.	Tons.	Tons.	Tons.	
1913–14	1,231,589	3,017,180	613,876	1,186,797	4,256,987
1914–15	920,659	2,633,805	700,133	917,978	3,714,344
1915–16	1,054,985	1,610,645	570,997	788,431	2,967,798
1916–17	1,185,159	1,994,528	444,210	686,010	2,804,680
1917–18	995,112	1,014,993	363,383	633,693	2,094,011

In respect of income, there has been no corresponding shrinkage, the figures being as follows :—

	Rs.
1913–14	1,51,28,435
1914–15	1,44,50,349
1915–16	1,59,35,456
1916–17	1,57,23,432
1917–18	1,58,39,175

But the development which might otherwise have been expected has not occurred and the actual results have been attained only by the imposition of special war surcharges brought into effect from 1st February 1915 in respect of general cargo and from 1st April 1916 in respect of coal. During the first four months of the year 1917-18 the decrease in income was very marked and an enhancement of the war surcharges was imposed with effect from 1st August 1917.

At the time of the outbreak of war, the Commissioners had in hand large development schemes which had been prepared as the outcome of the report of the Special Port Facilities Committee appointed by Government in December 1913 to investigate the important questions connected with the future development of the port, but the executions of these schemes, so far as they were in hand in August 1914, has been seriously delayed and the commencement of the larger portions of them including the construction of a new dock to be entitled King George's Dock, has been delayed both on account of the impossibility of obtaining materials and the financial restrictions laid down by the Government of India.

BOMBAY.

The Board of Trustees of the Port of Bombay is constituted of 17 members, as follows :—

Appointed by Government.—Mr. G. W. Hatch, C. S. (*Chairman*), Mr. Mahomedbhoy Currimbhoy Ebrahim (Messrs. Currimbhoy Ebrahim & Co.), Col. H. A. L. Hepper, R.E. (Agent, G. I. P. Ry.), Mr. R. F. L. Whitty, I.C.S. (Collector of Customs, Bombay), the Hon'ble Mr. Purshotamdas Thakurdas (Messrs. Narandas Rajaram & Co.), Mr. R. Woolcombe (Agent, B. B. & C. I. Ry.), Mr. P. W. Monie, I.C.S. (Municipal Commissioner, Bombay), Brigdr.-General W. C. Dunlop, C.B., C.S.I., D.S.O., A.D.C. (Military Officer serving with Bombay Brigade), the Hon. Mr. Phiroze C. Sethna (Sun Life Assurance Co., of Canada), Capt N. F. J. Wilson, C.M.G., R.I.M. (Director of the Royal Indian Marine.)

Elected by the Chamber of Commerce.—Mr. J. H. Froom (P. & O. S. N. Co.), the Hon'ble Mr. T. W. Birkett (Messrs. Killick, Nixon & Co.), Mr. Nigel F. Paton (Messrs. W. & A. Graham & Co.), Mr. J. S. Wardlaw Milne (Turner, Morrison & Co.) and the Hon. Mr. M. N. Hogg (Forbes, Forbes, Campbell & Co.),

Elected by the Native Piece Goods Merchants' Association.—Mr. Devidas Madhowji Thakersey (Messrs. Madhowji Thakersey & Co.),

Elected by the Millowners' Association.—Sir Vithaldas D. Thackersey, Kt. (Messrs. Thakersey Moolji & Co.).

The following are the principal officers of the Trust :—

Secretary.—Mr. W. R. Sharp.

Chief Accountant.—Mr. J. Tyers

Engineers.—Messrs. P. G. Messent, C.I.E., M. INST. C.E. (Chief Engineer), Mr. A. C. W. Fosbery, M. INST. C. E. (Deputy Chief Engineer), L. H. Savile, M. INST. C.E. (Deputy Chief Engineer, New Docks Works).

Port Officer.—Captain C. S. Hickman, D.S.O., R.I.M.

Docks Manager.—Major J. A. Cherry.

The revenue of the Trust in 1916-17 amounted to Rs. 1,78,30,313. The expenditure amounted to Rs. 1,61,84,164. The net surplus on the year's working was Rs. 16,46,149, which was transferred to the Revenue Reserve Fund, from which the Trustees are temporarily financing a large part of their capital expenditure. The balance of the fund at the close of the year amounted to Rs. 1,02,80,847. The aggregate capital expenditure during the year was Rs. 36,58,529. The construction of the new Alexandra Dock railway station was completed and the mail steamer berth opened for passenger and mail traffic, in March, 1918. The first floor of the station, designed for the reception and sorting of mails, was handed over to Government and taken into use by the Chief Base Postmaster for the handling of all mails for the Expeditionary Forces. The total debt of the Trust at the end of the year amounted to Rs. 15,30,65,747.

The trade of the Port of Bombay during the last official year aggregated 182¼ crores in value, a decrease compared with the previous year of about 7¾ per cent. (exclusive of Government transactions).

The number of steam and square rigged vessels which entered the docks or were berthed at the harbour walls and paid dues, excluding those which remained for unloading and loading in the harbour stream during recent years, including last year, is shown by the following statement :—

Year.	Number.	Tonnage.
1906–07	1476	2,699,406
1907–08	1477	2,678,345
1908–09	1474	2,633,303
1909–10	1611	2,747,779
1910–11	1589	2,866,623
1911–12	1519	2,767,913
1912–13	1566	2,926,506
1913–14	1579	3,135,597
1914–15	1880	4,417,035
1915–16	1794	3,939,721
1916–17	2112	5,031.572
1917–18	2069	4,746,578

The two dry docks were in constant occupation, the total tonnage of vessels dry docked amounting to the record figure of 1,453,688 tons which exceeded the previous year's record by 258,613 tons. The biggest dry-docking tonnage for any pre-war year was 612,305 tons.

KARACHI.

The members of the Board of Trustees of the Port of Karachi are as follows:—

Chairman—Mr. H. C. Mules., C.S.I., M.V.O.

Appointed by Government.—Mr. W. U. Nicholas (Vice-Chairman), (Anderson & Co.) Mr. R. F. L. Whitty, I.C.S. (Chief Collector of Customs in Sind), Mr. W. P. Freeman (District Traffic Superintendent, Karachi Port, North Western Railway) on leave, Mr. G. S. Bocquet, Major H. W. Tobin, D.S.O. (General Staff Officer, Karachi Brigade), Mr. T. J. Stephen (The National Bank of India, Ltd.) on leave, Mr. Gidumal Lekhraj (Representative Indian Merchant), Col. H. J. Mahon (Embarkation Commandant) on leave, Lt.-Col. E. K. Twiss, D.S.O. acting

Elected by the Chamber of Commerce.—Mr. E. A. Pearson (Forbes, Forbes, Campbell & Coy., Ltd.,) Mr. J. R. Baxter (Mackinnon, Mackenzie & Co.), Mr. S. C. Woodward (Clement Robson & Co.).

Elected by the Municipality.—Mr. Yusafali Alibhoy.

The principal officers of the Trust are :—

Port Officer.—Commander G. N. Forteath, R.I.M.

Secretary.—(Vacant) Mr. T. S. Downie, O.B.E. acting).

Chief Engineer.—Mr. W. H. Neilson, B.A., B.A.I., B. Sc., M.I.C.E.

Superintendent, Export and Import.—Mr. T. S. Downie, O.B.E., (on deputation), Mr. A. A. Flynn (acting).

The revenue receipts and expenditure of Karachi Port for the year 1917-18 were as under :—

Revenue receipts (excluding the Port Fund Account), Rs. 64,17,250, Expenditure Rs. 48,19,035. Surplus Rs. 15,98,215. Reserve Fund Rs. 34,64,300 (face value) all invested in terminable securities.

The revenue receipts in 1916-17 were Rs. 44,91,044. The capital debt of the port at the close of the last financial year amounted to Rs. 2,58,84,923.

The number of vessels entering the port in the year 1917-18 was 5,504 with a tonnage of 3,074,606¼ tons against 4,301 with a tonnage of 2,522,945 tons in 1916-17. This is exclusive of vessels put back and fishing boats. The number of steamers which entered the port was 1,439 against 1,118 in the previous year. The tonnage of steamers entering the port was 2,851,533 compared with 2,341,278 in the previous year

Imports landed at the ship wharves during the year totalled 161,115 tons against 204,128 in the previous year. Total shipments from the ship wharves were 3,060,390 tons in 1917-18 against 1,628,629 tons in 1916-17.

Plans and estimates were in 1915 submitted o and approved by Government for a West Wharfage Scheme to provide 16 new berths, he cost being estimated at Rs. 5,43,77,990, though the Trust anticipate that these estimates will have to be thoroughly revised." Some Rs. 17 lakhs were spent on the scheme up to the end of 1915, and for the present it is proposed to carry out a portion of the scheme only, viz., for 6 berths, at an estimated cost of over Rs 1,48,00,000. Much dredging and the construction of a protecting bank as the sea face of the new wharf and of a clay bund along the west side of the area to be reclaimed were completed last year. Government also sanctioned in 1915 plans and estimates for a Lower Harbour Improvement Scheme costing Rs. 25,25,000, which is a corollary to the other improvements. Under this scheme, the entrance channel will be deepened to a depth of 32 ft. 6 in. at L. W. O. S. T. This will enable any ship that can pass through the Suez Canal to enter the harbour and take up a berth at the lowest state of the tide. The sanctioned draught for the Suez Canal is now 29 feet, but 32 feet are being worked up to and it is understood that this will not be the extreme limit. Nothing has been done in connection with this scheme. Since 1916 work having been stopped by war conditions.

MADRAS.

The following gentlemen are the Trustees of the Port of Madras:—

Officials.—The Hon'ble Sir Francis J. E. Spring, K.C.I.E. (Chairman), the Collector of Customs, Captain C. B. Henley, R.I.M. (Presidency Port Officer), and Mr. W. Hutton, A.M.I.C.E. (Superintending Engineer, V Circle, Madras).

Non-Officials.—(1) *Nominated by Government.*—Mr. A. Muirhead, C.I.E., Mr. R. Todd, M. R. Ry. Rao Bahadur P. Thyagaraya Chetti Garu, B.A., M. R. Ry. C. Gopal Menon Avergal. (2) *Representing Chamber of Commerce, Madras.*—The Hon'ble Mr. Gordon Fraser, Sir Hugh S. Fraser, Kt., Mr. A. P. Symonds, Mr. H. P. M. Stanes, (3) *Representing Southern India Chamber of Commerce, Madras.*—Khan Bahadur Muhammad Abdul Kuddus Badsha Sahib and M. R. Ry. Rao Sahib C. Ramanujam Chetti Garu, (4) *Representing Madras Trades Association.*—Mr. R. J. C. Robertson.

The receipts of the Trust from all sources in 1917-18 were Rs. 16,74,265 against Rs. 13,13,310 in 1916-17. These are the largest annual receipts on record and it is expected that those of 1918-19 will exceed them. The gross expenditure out of revenue—not counting contributions made by revenue to capital or repayment of debt—was Rs. 17,91,537. During the year 354 records with an aggregate tonnage of 738,371, including 210 from foreign ports, called at the port as against 399 vessels aggregating 961,708 tons in the preceding year.

RANGOON.

The personnel of the Commissioners for the Port of Rangoon is comprised of the following thirteen members :—

Appointed by Government.—Sir George C. Buchanan, Kt., K.C.I.E., M. Inst. C.E. (Chairman, on deputation), Mr. J. L. Holmes, M.Inst. C.E. (Chairman, *sub pro tem*), Mr. J. A. Stevens (Chief Collector of Customs, Burma), Mr. E.C.S. Shuttleworth, (Offg. Commissioner of Police, Rangoon), Captain E. J. C. Hordern, R.I.M., (Principal Port Officer, Burma), Mr. G. Scott, M.A., I.C.S. (President, Rangoon Municipality), Mr. J. W. A. Bel, Mr. H. B. Huddleston, O.B.E., (Vice-Chairman), and Maung Po Yee.

Elected by the Burma Chamber of Commerce.—Messrs. J. A. Polson, D. Robertson, W. Buchanan and J. A. Swan.

Elected by the Rangoon Trades Association.—Mr. F. Watson.

Officers of the Trust are—

Secretary.—Mr. I. Cowling (on special war leave); Mr. H. Leonard, *sub pro tem.*

Resident Engineer.—Mr. W. Lindley, *sub pro tem.*

Executive Engineer (River Conservancy).—Mr. E. C. Niven, A.M. Inst. C.E. (on special war leave); Mr. W. Lindley (officiating).

Deputy Conservator.—Mr. H. G. G. Ashton (on special war leave); Mr. G. Cardno, *sub pro tem.*

Traffic Manager.—Mr. E. H. Keeling (on special war leave); Mr. J. H. Primrose Wells, *sub pro tem.*

Chief Accountant.—Mr. D. H. James (on leave); Mr. S. N. Sen (officiating).

Port Health Department.—Dr. F. A. Foy, M.B., C.M., D.P.H., Port Health Officer.

Port Police Department.—Mr. T. Austin, Superintendent.

The receipts and expenditure on revenue account of the port of Rangoon in 1917-18 were as follows :—

	Rs.
Receipts	41,45,306
Expenditure	42,75,212

The capital debt of the port at the end of the year was Rs. 2,98,62,000. Securities (at cost) of Rs. 57,10,561 are held at the credit of the sinking fund.

The total value of the trade of the port during the year was Rs. 4,896·66 lakhs, as compared with Rs. 5,272·44 lakhs in the preceding year.

The total imports (landed or sent inland in river craft) from sea-going vessels amounted to 737,961 tons. Goods landed from vessels arriving from European ports and other ports outside Asia declined by 43 per cent., and from Asiatic ports by 9 per cent. The traffic at the jetties for inland vessels totalled 1,073,052 tons. The total number of steamers (excluding Government vessels) entering the port was 914 with a total net registered tonnage of 1,744,936, being 82 steamers and 319,155 tons below the previous year.

CHITTAGONG.

Chittagong, in Eastern Bengal, on the right bank of the Karnaphuli river 12 miles from its mouth, was already an important place of trade in the sixteenth century, when the Portuguese merchants gave it the name of Porto Grando. The construction of the Assam Bengal Railway has made it the natural outlet for the trade of Assam and part of Eastern Bengal. The chief business is the export of the Piecegoods, salt and kerosene oil are imported, and jute and tea are the principal exports.

The chief business is the export of tea, piece goods, salt and kerosine oil are imported, and tea and jute are the principal exports—

Foreign Trade, 1917-18.	Rs.
Imports	40,70,988
Exports	2,29,83,348
Coasting Trade, 1917-18.	
Imports	2,10,09,667
Exports	75,70,203

VIZAGAPATAM HARBOUR PROJECT.

The question of the creation of a harbour at Vizagapatam, to supply an outlet for a large area of fertile country hitherto undeveloped and without suitable access to the outside world, has been lately brought to the fore through a report to the Bengal-Nagpur Railway Company by their consulting engineers, Sir John Wolfe Barry, Lyster and partners. This report, which was based on personal inspection, upholds the practicability of creating, at no very extravagant cost, an inland harbour to which access would be maintained by two breakwaters projecting into the sea, and by dredging a channel to the depth (in the first instance) of 24 feet. A deep-water quay would be provided, 1,500 feet in length, with a possibility of supplying further accommodation in the future. The proposals made in this report have been carefully gone into at site by representation both of the consulting Engineer and the Bengal Nagpur Railway, and working plans are now being prepared so that there may be no delay in starting work when funds are available for the purpose. It is understood that the question is meeting with sympathetic consideration on the part of the Indian Government and that the Bengal-Nagpur Railway will probably be given powers to raise capital for the construction and working of the port as part of their railway system. That the creation of such a port would have a beneficial influence on the development of a large area in East Central India seems unquestioned. It is pointed out that Vizagapatam, lying as it does in front of the only practicable gap in the barrier of the Eastern Ghats, is formed by nature to be the outlet of the Central Provinces, from which a considerable amount of trade has taken this route in the past, even with the imperfect communications hitherto available. A necessary complement of the scheme would be the construction of the proposed railway by Parvatipuram to Raipur, which with the existing coast line of the Bengal Nagpur Railway, would make a large and rich area tributary to the proposed port, and obviate the long and expensive circuit by Calcutta. A link would also be supplied in the most direct route to Rangoon from Europe by way of Bombay, while from an imperial point of view the possible provision of a fortified port on the long and almost unprotected stretch of coast between Colombo and Calcutta is held to be a consideration of great importance. The lofty projecting headland of the Dolphin's Nose would, it is pointed out, offer facilities for this purpose as well as protecting the entrance to the Port from the effects of south and south-westerly gates.

Famine.

Famine in India is the inevitable accompaniment of economic conditions which leave the bulk of the people dependent on the soil for their means of livelihood. It is intensified, because the produce of the soil over the greater part of India is independent on a short rainy season, and the rains are erratic and subject to violent fluctuations. It falls with exceptional severity on India because the soil is divided into a multitude of petty holdings, filled by people without any capital, living for the most part from hand to mouth, and amongst whom credit ceases to exist as soon as the rains fail. In other agricultural countries there are good seasons and bad; but there is none other, with the possible exception of China, where in a famine year millions of acres may not yield so much as a blade of grass, except under artificial irrigation. The conclusion to be drawn from these conditions is that for many years to come India must be susceptible to famine. The shock of famine may be mitigated by the spread of railways, by the development of irrigation, the growth of manufacturing industry and the improvement of rural credit. There is evidence that all these forces are tending greatly to reduce the social and economic disturbance caused by a failure of the rains, but they cannot entirely remove it.

Famine Under Native Rule.

At one time there was a general tendency to attribute famine in India entirely to the effect of British rule. In the golden age of India, we were told—whenever it may have been—famine was unknown. But India had been drained of its resources of food by the railways, the people had been impoverished by the land revenue demand and the country as a whole had been rendered less capable of meeting a failure of rains by the "Drain" caused by the Home charges (*qv*). These fallacies have disappeared under the inexorable logic of facts. A better knowledge of Indian history has shown that famines were frequent under Native rule, and frightful when they came. "In 1630" says Sir William Hunter, in the History of British India, "a calamity fell upon Gujarat which enables us to realise the terrible meaning of the word famine in India under Native rule. Whole cities and districts were left bare of inhabitants." In 1631 a Dutch merchant reported that only eleven of the 260 families at Swally survived. He found the road thence to Surat covered with bodies decaying on the highway where they died, there being none to bury them. In Surat, that great and crowded city, he could hardly see any living persons; but "the corpses at the corner of the streets lie twenty together, nobody burying them. Thirty thousand had perished in the town alone. Pestilence followed famine." Further historical evidence was adduced by Sir Theodore Morrison in his volume on the Economic Transition of India. The "Drain" theory has been exploded. It has come to be seen that whilst railways have checked the old-fashioned practice of storing grain in the villages they have made the reserves, where they exist, available for the whole of India. In India there is now no such a thing as a food famine; the country always produces enough food for the whole of the population; famine when it comes is a money famine and the task of the State is confined to providing the means for those affected by drought to earn enough to buy food. The machinery whereby this is done will be examined after we have seen the experiences through which it was evolved.

History of Recent Famines.

The Orissa famine of 1865-67 may be taken as the starting point because that induced to first great and organised effort to combat distress through State agency. It affected 180,000 square miles and 47,500,000 people. The Bengal Government was a little slow in appreciating the need for action, but later food was poured into the district in prodigious quantities. Thirty-five million units were relieved (a unit is one person supported for one day) at a cost 95 lakhs. The mortality was very heavy, and it is estimated that a million people, or one-third of the population, died in Orissa alone. This was followed by the Madras famine of 1866, and the famine in Western India of 1868-70. The latter famine introduced India to the great migration from Marwar which was such a distinguishing feature of the famine of 1899-1900; it is estimated that out of a total population of a million and a half in Marwar, one million emigrated. There was famine in Behar in 1873-74, then came the great South Indian Famine of 1876-78. This affected Madras, Mysore, Hyderabad and Bombay for two years and in the second year extended to parts of the Central and United Provinces and to a small tract in the Punjab. The total area affected was 257,000 square miles and the population 58,500,000. Warned by the excessive expenditure in Behar and actuated by the desire to secure economy the Government relief programme was not entirely successful. The excess mortality in this famine is said to have been 5,250,000 in British territory alone. Throughout British India 700,000,000 units were relieved at a cost of Rs. 8¼ crores. Charitable contributions from Great Britain and the Colonies aggregated Rs. 84 lakhs.

The Famine Codes.

The experiences of this famine showed the necessity of placing relief on an organised basis. The first great Famine Commission which sat under the presidency of Sir Richard Starchey, elaborated the Famine Codes, which amended to meet later experience, form the basis of the famine relief system to-day. They recommended (1) that employment should be given on the relief works to the able-bodied, at a wage sufficient for support, on the condition of performing a suitable task; and (2) that gratuitous relief should be given in their villages or in poor houses to those who are unable to work. They recommended that the food supply should be left to private agency; except where that was unequal to the demands upon it. They advised that the land-owning classes should be assisted by loans, and by general suspensions of revenue in proportion to the crop failure. In sending o

Famine Code to the provincial governments, the Government of India laid down as the cardinal feature of their policy that the famine wage "is the lowest amount sufficient to maintain health under given circumstances. Whilst the duty of Government is to save life, it is not bound to maintain the labouring population at its normal level of comfort." Provincial codes were drawn up, and were tested by the famine of 1896-97. In that 307,000 square miles were affected, with a population of 69,500,000. The numbers relieved exceeded 4,000,000 at the time of greatest distress. The cost of famine relief was Rs. 7½ crores, revenue was remitted to the extent of Rs. 1¼ crore, and loans given aggregating Rs. 1⅞ crore. The charitable relief fund amounted to about Rs. 1¾ crore, of which Rs. 1¼ crore was subscribed in the United Kingdom. The actual famine mortality in British India was estimated at 750,000. The experiences of this famine were examined by a Commission under Sir James Lyall, which reported that the success attained in saving life and the relief of distress was greater than had ever been recorded in famines, comparable with it in severity, and that the expense was moderate. But before the Local Governments had been given time to digest the proposals of this Commission or the people to recover from the shock, the great famine of 1899-1900 supervened.

The Famine of 1899-1900.

This famine affected 475,000 square miles with a population of 59,500,000. In the Central Provinces, Berar, Bombay, Ajmer, and the Hissar district of the Punjab famine was acute: it was intense in Rajputana, Baroda, Central India, Hyderabad and Kathiawar. It was marked by several distinctive features. The rainfall over the whole of India was in extreme defect, being eleven inches below the mean. In several localities there was practically no rain. There was in consequence a great fodder famine, with a terrible mortality amongst the cattle. The water supply was deficient, and brought a crop of difficulties in its train. Then districts like Gujarat, where famine had been unknown for so many years that the locality was thought to be famine immune, were affected; the people here being softened by prosperity, clung to their villages, in the hope of saving their cattle, and came within the scope of the relief works when it was too late to save life. A very large area in the Native States was affected, and the Marwaris swept from their impoverished land right through Central India like a horde of locusts, leaving desolation in their train. For these reasons relief had to be given on an unprecedented scale. At the end of July 4,500,000 persons were supported by the State, Rs. 10 crores were spent on relief, and the total cost was estimated at Rs. 15 crores. The famine was also marked by a widespread acceptance by Native States of the duty hitherto shouldered by the Government of India alone—the supreme responsibility of saving human life. Aided by loans to the extent of Rs. 3½ crores, the Native States did a great deal to bring their administration into line with that in British India. Although actual deaths from starvation were insignificant, the extensive outbreaks of cholera, and the devastating epidemic of malaria which followed the advent of the rains induced a famine mortality of approximately a million. The experiences of this famine were collated by the Commission presided over by Sir Antony MacDonnell. This Commission reported that taking the famine period as a whole the relief given was excessive, and laid down certain modified lines. The cardinal feature of their policy was moral strategy. Pointing out that if the people were assisted at the start they would help themselves, whilst if their condition were allowed to deteriorate it proceeded on a declining scale, they placed in the forefront of their programme the necessity of "putting heart into the people." The machinery suggested for this purpose was the prompt and liberal distribution of tagai loans, the early suspension of revenue, and a policy of prudent boldness, starting from the preparation of a large and expansive plan of relief and secured by liberal preparations, constant vigilance, and a full enlistment of non-official help. The wage scale was revised; the minimum wage was abolished in the case of able-bodied workers; payments by results were recommended; and proposals were made for saving cattle.

Success of the new policy.

The effectiveness of this machinery was partly demonstrated during the three lean years which followed the great famine in the Bombay Presidency. But it received its most conspicuous demonstration when the rains failed in the United Provinces in 1907-08. Moral strategy was practised here on an unprecedented scale, tagai loans being granted with the greatest liberality. The effect of these measures was succinctly indicated by the Lieutenant-Governor of the United Provinces, Sir John Hewett, in a speech in summarising his administration prior to his departure in England in March 1912. He showed that in the autumn harvest of 1907 there was a shortage of 4 million tons of food grains and in the spring harvest a shortage of 3 million tons, giving a total of seven million tons, or the food supplies for the Province for nine months and an economic loss of £38 million pounds. The Government advanced £1¼ million to cultivators for temporary purposes and large sums for wells and permanent irrigation. The whole of this sum was repaid except fifty-four thousand pounds remitted owing to a second bad season and twenty-five thousand pounds then outstanding. By common consent a great famine had never been met with less loss and suffering to the people, and two years later hardly a trace of it remained. In 1911 the rainfall failed over a considerable area in Gujarat in the Bombay Presidency and again in 1912 in the Ahmednagar District of the Bombay Deccan and both these partial failures demonstrated that the shock of famine is far less severe now, owing to the increased resourcefulness of the people, than it was so late as 1899. Still further evidence in the same direction was furnished when the rains failed over large areas in the United Provinces in 1913-14. This famine affected 17,000 square miles with a population of 5¼ millions, whilst distress was grave in 30,000 square miles with a population of 14 millions.

Three points soon emerged from the ear—the people showed greater resisting ower owing to their improved economic co- ition; they met the emergency with wonder- l courage and resource; and the application the relief programme brought the numbers a public works within manageable propor- ons, and induced the speedy return of the eople to their normal avocations when the ivent of bountiful rains in 1914 enabled agri- ltural operations to be generally resumed.

The Government of India is now in posses- on of complete machinery to combat the fects of drought. In ordinary times Govern- ent is kept informed of the meteorological nditions and the state of the crops; pro- ammes of suitable relief works are kept up date, the country is mapped into relief rcles, reserves of tools and plant are stocked. the rains fail, policy is at once declared, n-officials are enlisted, revenue suspended d loans for agricultural purposes made. est works are then opened, and if labour in nsiderable quantities is attracted, they are nverted into relief works on Code principles. oor houses are opened and gratuitous relief ven to the infirm. On the advent of the ins the people are moved from the large orks to small works near their villages, liberal lvances are made to agriculturists for the rchase of plough, cattle and seed. When e principal autumn crop is ripe, the few re- aining works are gradually closed and gratui- us relief ceases. All this time the medical aff is kept in readiness to deal with cholera, hich so often accompanies famine, and ma- ria, which generally supervences when the ins break. Recent experiences go to show at never again will the Government of India compelled to distribute relief on the tre- endous scale demanded in 1899-1900. The gh prices of produce have given the culti- tors considerable resources, the extension irrigation has protected a larger area, and bour has become more mobile, utilising to e full the increasing industrialism of the untry. For instance, in 1911 the rains in jarat failed completely, yet there was tle demand for relief works, and the neces- ies of the cultivators were rather for fodder r their cattle than for money or food for emselves. Various schemes are now under nsideration for the establishment of fodder serves in the villages.

Famine Protection.

Side by side with the perfection of the ma- inery for the relief of famine has gone the velopment of famine protection. The Fa- ine Commission of 1880 stated that the best, d often the only means of securing protec- n from the extreme effects of famine and ought, are railways and irrigation. These e of two classes, productive and protective. oductive works being estimated to yield ofits which will pay interest and sinking nd charges are met from loans; protective rks, which do not pay, directly from revenue. order to guarantee that there should be ntinuous progress with protective works, e Famine Insurance Grant was instituted 1876. It was decided to set apart from the neral revenues Rs. 1½ crores annually, or e million sterling. The first charge on this grant is famine relief, the second protective works, the third the avoidance of debt. The chain of protective railways is now practically complete. Great progress is being made with protective irrigation. Acting on the advice of the Irrigation Commission (*qv*) an elaborate programme of protective irrigation works is being constructed, particularly in the Bombay Deccan—the most famine susceptible district in India—and in the Central Provinces. When these are completed, the shock of drought will be immensely reduced.

The Indian Famine Trust.

Outside the Government programme there is always scope for private philanthropy, especially in the provision of clothes, help for the superior class poor who cannot accept Government aid, and in assisting in the rehabilitation of the cultivators when the rains break. At every great famine large sums have been subscribed, particularly in the United Kingdom, for this purpose, and in 1899-1900 the people of the United States gave generous help. With the idea of providing a permanent famine fund, the Maharaja of Jaipur gave in 1900 a sum of Rs. 16 lakhs, in Government securities, to be held in trust for the relief of the needy in time of famine. This Trust has now swollen to Rs. 30 lakhs, chiefly from gifts by the founder's family. It is vested in trustees drawn from all parts of India, and is freely used in an emergency.

The Cost of Famine.

The fruits of this policy are revealed in a return on the last serious famine which has occurred in India. In the United Provinces the failure of the 1913 monsoon, followed by poor and unseasonable cold weather rains, led to a widespread failure of crops affecting an area of 18,200 square miles and a population of 6 millions, but the prosperity of the preceding years had enabled the population to develop a far greater staying power than on previous occasions of famine, nor was the rise in food prices so marked. Government made loans to cultivators amounting to over £1,250,000, besides suspending land revenue and sanctioning remissions amounting to over £717,000. The necessity for direct measures of relief did not arise till December, which is considerably later than on previous occasions of famine. The cost of direct relief operations to Government, including provision of cattle-fodder, was about £382,000, a far smaller figure than in the famine of 1907-08, although the estimated loss of food-grains was almost as great. The Public Works Department, the civil authorities, and district boards arranged for the carrying out of numerous projects with famine labour. These comprised construction of roads, tanks and irrigation works and the reclamation of ravine land—all works of undoubted utility. Gratuitous relief amounted to £80,600; it was given principally to persons incapable of working. A marked feature of the famine was the extreme scarcity of fodder, which was met chiefly by concession rates for the carriage of fodder on railways and the supply of hay from the forests. Much good work was done by non-official efforts, and a

charitable fund was raised to the amount of £27,424. The total cost of the famine to Government is estimated at £820,000, as against £ 2,130,000 in 1907-08. Good rains in July and September 1914 finally relieved the situation and ensured a good kharif crop. There was a widespread failure of the rains in 1918, but it is too early to estimate the economic results.

BOY SCOUTS.

The Boy Scouts movement, initiated in England by Lt.-Gen. Sir Robert Baden Powell (the Chief Scout), has spread widely in India, and the Boy Scouts Association has received the patronage of the Viceroy and the heads of the local governments. The aim of the Association is to develop good citizenship among boys by forming their character—training them in habits of observation, obedience and self-reliance—inculcating loyalty and thoughtfulness for others—and teaching them services useful to the public and handicrafts useful to themselves.

The following division of duties of the Indian Headquarters is officially published for information:—*The Assistant Chief Commissioner* deals with all matters of organisation and Discipline, including the issue of Warrants to new local Associations and Officers, also the registration of new troops, which should be applied for on Form C. obtainable from the General Secretary. Recommendations for awards of Life Saving Medals and Certificates should be made to him and also all applications for exemption from the swimming test for 1st class (Regulation 21) and all correspondence on the subject of Challenge Trophies. Owing to the war the movement in India has suffered considerable dislocation and embarrassment. Fifteen new associations were formed during 1914-15 but six others are temporarily in suspension. The latest annual report gives the followng details of a census of Boy Scouts Associations in India:—Local Associations, 43. Troops, 99. Scout Masters, 90. Assistant Scout Masters, 26. Scouts, 2,161. Wolf Cubs, 180. Grand Total, 2,457.

The General Secretary deals with routine matters official publications, sale of badges, and also all matters connected with the official publication, *The Boy Scouts Gazette of India*. Local Secretaries can communicate with him direct on these matters and it is not necessary to refer to the Commissioners on such subjects.

The *Boy Scouts Gazette of India* published monthly, is the official organ of the Movement in India and in it are notified all official notices and orders issued by the Indian Headquarters. It is obtainable from the General Secretary Subscription Rs. 2-8-0 per annum.

HEADQUARTERS STAFF IN INDIA.

Chief Commissioner—Major-General E. S May, C.B., C.M.G, Lucknow.

Deputy Chief Commissioner—Lieut.-General Sir W. K. Birdwood, K.C.S.I., K.C.M.G., C.B., C.I.E., D.S.O. *On Service.*

Offg. Deputy Chief Commissioner—Major-General R. Wapshare, C.B., Poona.

Commissioner for Sea Scouts—Captain W. Lumsden, C.V.O., A.D.C., R.N., Director, Royal Indian Marine, Bombay.

Deputy Commissioner for Sea Scouts—Commander E. A. Constable, A.D.C., R.N., Commandant, Calcutta Port Defence Volunteers.

Assistant Chief Commissioner—Captain W. P. Pakenham-Walsh, R.E., Poona.

Hon. General Secretary—Captain A. G. Potter, A.D.C., Dilkhusha, Lucknow.

Hon. Treasurer—E. E. Savi, Esq. Alliance Bank of Simla, Calcutta.

Bankers.—The Alliance Bank of Simla, Calcutta.

The Co-operative Movement.

Before the end of the last century the co-operative movement had proved so successful in its attempt at re-generating rural life in countries with such diverse conditions as Germany, Italy, Switzerland and Ireland, that enthusiasts like Mr. Wolff, social workers like the late General Booth, and Indian administrators like Sir Anthony (now Lord) Macdonell and Mr. Dupernex were anxious to introduce the movement to improve the economic and moral condition of the Indian ryot. More than sixty per cent. of the vast population of India subsists on agriculture and the majority of these millions generally live, under present conditions, from hand to mouth. The ryot's occupation is healthy and productive, and he is proverbially honest and straightforward in his dealings, except when years of famine and hardship make him at times crafty and recalcitrant. Owing to his poverty, combined with deficiency in education and consequent lack of foresight, however, he has to incur heavy debts to meet occasional expenses for current seasonal purposes, the improvement of his land, or for ceremonial objects, and he has therefore to seek the assistance of the local money-lender, known as the Sowkar or the Mahajan. The rates of interest on such advances vary from province to province and even in different parts of a province. The average rate ruling throughout Bombay Presidency is lower than in most other provinces and there are again variations in the rate in the Presidency itself; it is 6 to 12 per cent. in Gujerat, and 12 to 24 per cent. in parts of Deccan, while it rises to the enormous figure of 50 per cent. in several tracts. In addition to charging these excessive rates the Sowkar extorts money under various pretexts and takes from the needy borrower bonds on which heavy stamp duties are payable. One of the chief causes of the ryot's poverty is, that owing to the absence of security and his short-sightedness due to want of education, he does not as a rule collect and lay by his savings, but fritters away his small earnings in extravagant and unproductive expenditure on the purchase of trinkets and ornaments and on marriage and other ceremonies. In some cases, he hoards coins under the ground with the likelihood that on his death the money is lost to his family for good. This absence of thrift and the habit of dependence, in case of difficulty, on the Government or on the Sowkar are the bane of his life. There is besides a total absence of ideals or desire for progress. A Co-operative Society would change all this, inasmuch as it would provide him with a suitable institution in which to lay by his savings and would teach him the valuable lesson of self-help through the sense of responsibility he would feel in being its member. Thus the chronic poverty and indebtedness of the Indian agriculturist afford a very good field for the introduction of co-operative methods, especially as his work is of a productive character likely to enable him to earn a better living under circumstances more favourable than they are at present.

Genesis of the Scheme.—The question of improving rural credit by the establishment of agricultural banks was first taken up in the early nineties when Sir W. Wedderburn, with the assistance of the late Mr. Ranade, prepared a scheme of Agricultural Banks which was approved of by Lord Ripon's Government but was not sanctioned by the Secretary of State. The matter was not again taken up until about fifteen years later when Lord Wenlock's Government in Madras deputed Mr. F. A. (now Sir Frederick) Nicholson, to report on the advisability of starting Agricultural and other Land Banks in the Presidency for the relief of the agriculturists. Sir Frederick had prepared himself by a study of Agricultural Banks and Co-operative Societies and had visited many European countries to see for himself the various developments of the co-operative movement. He was also conversant with the social conditions of the Presidency where there had been in existence an institution called the Nidhi, which corresponded in some respects to the Provident Funds and Friendly Societies in European countries. Though these institutions provided cheap capital to the agriculturists the spirit of co-operation was lacking in them. This want was supplied in early times by the Village Panchayats which showed to what extent communal life and ideas of local self-government had developed in India. Sir Frederick, after thoroughly going into the conditions of the Presidency, submitted an exhaustive report to Government suggesting that the formation of Co-operative Societies afforded an excellent means for relieving rural indebtedness. The report surveyed the growth of the co-operative movement in European countries, the conditions favourable to its development in India, if introduced, and the difficulties to be encountered in introducing it and making it a success here. Finally, it contained for the consideration of Government a draft Bill for the organization of Co-operative Societies. Sir Frederick pleaded for concessions to be given to the Societies—such as exemption from the income-tax and remission of the stamp duty—as he felt that it would be possible to attract the people to the new movement only if Government showed its active sympathy towards it at the commencement. He ended with a fervent appeal to the non-official community "to find a Raiffeisen" who would help the ryots of this country in achieving results equal to those obtained by Raiffeisen's noble efforts in Germany. Unfortunately the report was not received favourably either by the non-official public or by the Government of Madras, and no action was taken on its suggestions.

Famine Commission of 1901.—The next few years saw two of the worst famines that India had ever suffered from, and in 1901, Lord Curzon appointed a Commission to report on the measures to be adopted in future to prevent famines and to protect the ryot from their ravages. The Commission laid stress on the proper working of the Agriculturists' Loans and the Land Improvement Loans Acts under which *takavi* advances are made to cultivators. This system was given a long trial in the years previous to the great famines as well as during the ten years succeeding the 1899-1900 famines. But it is acknowledged on all hands that the system has not been

successful in solving the problem of rural stagnation as it is clear that it is not facility for obtaining cheap capital alone which will raise the agriculturists and relieve him from his debts, but the provision of capital combined with the inculcation of habits of thrift and self-help. The Commission also recommended that the principal means of resisting famines was by strengthening the moral backbone of the agriculturist and it expressed its view that the introduction of co-operation in rural areas might be useful in securing this end.

Co-operative Credit Societies' Act.—These recommendations induced Lord Curzon to appoint a Committee with Sir Edward Law at its head to investigate the question and a Report was submitted to Government recommending that Co-operative Societies were worthy of every encouragement and of a prolonged trial. Sir Anthony (now Lord) Macdonell and others were at the same time making experiments on similar lines in the United Provinces and the Punjab with satisfactory results. All these activities, however, took a practical shape only when Lord Curzon took up the question in all earnestness, and his Government introduced in the Supreme Legislative Council a Bill to provide for the constitution and control of Co-operative Credit Societies. The main provisions of the Bill which became the Co-operative Credit Societies' Act (Act X of 1904) were :—

(1) That any ten persons living in the same village or town or belonging to the same class or caste might be registered as a Co-operative Society for the encouragement of thrift and self-help among the members.

(2) The main business of a Society was to raise funds by deposits from members and loans from non-members, Government and other Co-operative Societies, and to distribute money thus obtained by way of loans to members or with the special permission of the Registrar, to other Co-operative Credit Societies.

(3) The organization and control of Co-operative Credit Societies in every Presidency were put under the charge of a Special Government Officer called the Registrar of Co-operative Credit Societies.

(4) The accounts of every society were to be audited by the Registrar or by a member of his staff free of charge.

(5) The liability of a member of a society was to be unlimited in the case of a Rural Society.

(6) No dividends were to be paid on the profits of a rural society, but the profits were to be carried at the end of the year to the Reserve Fund, although when this fund had grown beyond certain limits fixed under the bye-laws, a bonus might be distributed to the members.

(7) In the case of Urban Societies no dividend was payable until one-fourth of the profits in a year were carried to the Reserve Fund.

Soon after the passing of the Act the local Governments in all the Presidencies and major provinces appointed Registrars with full powers to organise, register, and control the Management of societies. In the early stages of the working of this Act, Government loans were freely given and the response to the organising work of the Registrars was gradual and steady throughout most parts of the country.

Co-operative Societies' Act—As co-operation progressed in the country defects were noticed in the Co-operative Credit Societies' Act and these were brought to the notice of Government by the Provincial Conferences held under the auspices of Local Governments in various Presidencies, as well as by the Annual Conferences of the Registrars. In two directions the need for improved legislation was especially felt. In the first place, the success of credi societies had led to the introduction of Co operative Societies for distribution and for purposes other than credit for which no legislative protection could be secured under the then existing law. And in the second place the need for a freer supply of capital and for an improved system of supervision had led to the formation of various central agencies to finance and control the original credit societies and these central agencies ran all the risk attendant on a status unprotected by legislation. The Government of India, recognising the need for removing these defects, decided to amend the old Act, and a Bill embodying the essential alterations proposed was introduced in the Imperial Legislative Council, and after a few amendments it emerged from the Council as the Co-operative Societies' Act (II of 1912) replacing Act X of 1904. The outstanding features of the new Act were as follows :—

(*a*) It authorised the formation of societies for purposes other than credit, which was possible under the old Act only with the special permission of the Local Government. The extension of Co-operation to purposes other than credit marks an important stage in its development in India.

(*b*) It defined in precise terms the objects for which Co-operative Societies could be organised.

(*c*) It removed the arbitrary division of societies into Rural and Urban.

(*d*) It facilitated the growth of central agencies by insisting on a limited liability by means of a special clause about the registration of a society one of whose members is a registered society.

(*e*) It empowered the Local Government to frame rules and alter bye-laws so as to put restrictions on the dividends to be declared by societies and allowed them the discretion to sanction distribution of profits in the case of unlimited liability societies to their members.

(*f*) It allowed societies with the permission of the Registrar to contribute from their net profits, after the Reserve Fund was provided for, amounts up to 10 per cent. of their remaining profits to any charitable purpose as defined in the Charitable Endowments' Act. This kept the movement in touch with local life by permitting societies to lend assistance to local educational and charitable institutions.

(*g*) It prohibited the use of the word "Co-operative" as part of the title of any business concern except a registered society.

Composition of the Capital of Agricultural Societies.—On the organization of agricultural credit was necessarily concentrated the attention of the promoters, for, it presented a far more important and far more difficult problem than industrial credit. There was a great variety of types among the agricultural societies started in different provinces, and some Registrars adopted the "Schulze-Delitzsch," some the "Raiffeisen," and some the "Luzzatti" methods in their entirety. The best course would have been to start a few model societies and leave the movement to develop on the lines which most suited the peculiar requirements and conditions of the country. The commonest type, as in the Punjab, Burma, and the United Provinces, is the unlimited liability society with a fee for membership and a small share capital, the share payments to be made in instalments. In some cases the system insists on compulsory deposits from members before entitling them to enjoy the full privileges of membership. The system in Bombay, Bengal, and the Central Provinces is entirely different, there being no share-capital but only a membership-fee. Part of the working capital is raised by deposits from members and other local sympathisers but the bulk of it is obtained by loans from Central and other Co-operative Societies. In all the Presidencies, the Government set apart every year a certain sum to be advanced as loans to newly started Co-operative Societies, usually up to an amount equal to the deposits from members, raised by a society. State aid in the form of money doles has now become an exception rather than the rule, and this withdrawal in no way hampers the development of the movement on account of the rapid increase of Co-operative financing agencies and the growth of public confidence in the primary societies. For agricultural societies generally, the main sources of capital are shares, deposits of members, loans and deposits from non-members and from Central and other Societies; and the contribution to the total working capital by each of these heads of income is as indicated below:—

	Rs.
Shares	88,89,023
Deposits from members	37,01,418
Loans and deposits from non-members	40,09,936
Loans and deposits from other societies	9,00,904
Loans from Provincial and Central Banks	8,37,47,521
State Aid	15,22,484
Reserve Fund	68,44,358

In some Provinces, notably in the Punjab and Bombay, the members' shares and deposits form more than 25 per cent. of the working capital.

Constitution of Agricultural Societies.—The typical Agricultural Society in India corresponds to the "Raiffeisen" society, the management being gratuitous, the profits indivisible, and the area of work limited. Usually, the Secretary if he is a *bona-fide* member of the Society gets a monthly pay of Re. 1 to Rs. 5 with a bonus at the end of the year equal to a fourth of annual profits. In parts of the country there are villages where a few literate men may be found but most of these are hardly fit enough to undertake the responsible work of a Secretary, being practically ignorant of account keeping. In such villages either the village school-master or the village accountant known in Bombay as the Talati, is appointed, to the post with a remuneration a little higher than that paid to the Secretary who is a *bona-fide* member. In some places, where a suitable person is not available on this low pay, neighbouring societies are grouped together with a whole-time, well-paid Secretary. This arrangement, which has its advantages, involves the drawback that the outsider working as Secretary does not naturally feel as much interest about the Society's working as a *bona-fide* member does and is less amenable to the control of the members. As the work of Societies develops, the need for trained Secretaries is being felt more keenly for it is now realized that the function of a Secretary does not consist merely in writing the accounts correctly. With a view to meet the demand for trained Secretaries, a training class has been organized in Bombay for the last few years by the Servants of India Society with the assistance and support of the local Department of Co-operative Societies. The work has now been systematized and placed in charge of a representative committee. Junior classes are held in areas which are developed co-operatively and the Senior classes are held in Bombay. More than two hundred men will under the new arrangements obtain training every year. Lectures were delivered at the class on the details of the work of co-operative societies and on the main principles of co-operation. This interesting experiment deserves to be copied in other parts of the country. Similar classes are being organised in Bihar and Orissa, in the United Provinces and Bengal.

Internal Management of Societies.—The Managing Committee consists of 5 to 9 intelligent members of the Society, the Chairman being usually the leading person in the village. The daily work of the Society is carried on by the Secretary, but the Managing Committee supervises the work and has alone the power to admit new members, to receive deposits, arrange for outside loans, grant loans to members and take notice of defaulters. The accounts of the Society are kept by the Secretary and the necessary forms, papers, and books are usually supplied from the Registrar's office to simplify the work of the Secretary. The books are kept according to the rules framed by the Local Governments and are open to inspection by important local officials and the Registrar and his staff. The accounts are audited, at least once a year, by the auditors working under the Registrars of Co-operative Societies and the Societies are inspected from time to time by honorary or paid Inspectors. The loans are mostly given on the security of two co-members. Under the Act, Societies are allowed under certain conditions to advance loans on the hypothecation of moveable or immoveable property and there is nothing uncooperative in this so long as personal security which is the central principle of co-operation is given and the borrower's property is recognized as only a secondary or collateral protection. Mortgages are taken occasionally especially

in the case of long term loans and loans for the liquidation of old debts. In some Provinces more general use has been made of mortgage security than in others, and mortgages have been at times more freely accepted as security than is either necessary or desirable. In Madras the percentage of loans secured on mortgage on the total amount advanced during 1913-14 was 47, in Bombay 43, in Burma 36, the average for all the Provinces being 14 per cent. This feature is noteworthy as real credit on a wholesale scale is not quite compatible with the true spirit of co-operation.

The supreme seat of authority in co-operative societies is the general body of members assembled in general meetings. At the Annual General Meeting held at the close of the co-operative year, the accounts are submitted, the balance-sheet passed, and the Managing Committees with the chairmen and secretaries are elected. The general meeting fixes in some provinces the borrowing limit of individual members, lays down the maximum amount upto which the Managing Committee may borrow during the ensuing year, dismisses members for misconduct or serious default, and settles the rates of interest for loans and deposits. As these meetings are informal, other local topics of public utility are sometimes discussed. All the net profits of the society are annually carried to the Reserve Fund, which is indivisible, that is, incapable of distribution as dividend or bonus, which cannot be drawn upon without the sanction of the Registrar, and which must be invested in such a manner as the Registrar prescribes. It is intended to meet unforeseen losses and to serve as an asset or security in borrowings. Except in the Central Provinces and Madras the Reserve Funds of primary societies are generally utilised as an addition to their working capital, though steps are being taken in some parts of the country to stop this practice and to insist on the Reserve being kept entirely apart from the working capital and invested in Government securities or placed as floating deposits in reliable Central Banks. The Government of India state in their Resolution of 17th June 1914 "that while there may be advantages in the earlier stages in using the Reserve as part of the working capital of the society, it should gradually, as it becomes more important, be set apart for separate investments." The general trend of opinion seems to be that primary societies should be free to utilize their reserve funds as part of the working capital except when they have considerable outside deposits and have not made special arrangements in respect of fluid resource to cover such borrowings.

Progress of the Movement.—The following statement shows the progress of Agricultural Societies up to the end of the official year 1915-16 :—

Provinces.	Number of Societies.	Number of Members.	Total Working Capital.	Reserve Fund.
			Rs.	Rs.
Madras	1,921	1,18,939	88,08,271	5,22,723
Bombay	1,091	80,762	52,14,837	3,20,272
Bengal	2,857	1,10,961	67,06,628	7,92,227
Bihar and Orissa	1,337	56,200	21,61,057	2,86,536
United Provinces ..	3,003	1,02,312	51,36,051	6,36,228
Punjab	3,417	1,29,544	1,40,70,943	27,08,600
Burma	1,985	45,939	79,56,834	8,72,615
Central Provinces ..	3,303	53,497	48,25,018	3,79,515
Assam	313	16,732	4,65,945	85,306
Coorg	24	2,781	1,23,470	29,701
Ajmer	372	12,848	11,65,181	....
Mysore	812	45,021	22,70,628	83,738
Baroda	290	8,716	7,10,781	1,26,807
TOTAL ..	20,725	7,84,252	5,96,15,644	68,44,358

Progress of the Movement.—The following statement shows the progress of Agricultural Societies up to the end of the official year 1916-17 :—*contd,*

Provinces.	Cost of Management.	Net Profit during the year 1916-17.	Deposits.	Usual Rate of Interest on Loans to Members.
	Rs.	Rs.		Per cent.
Madras	74,474	2,45,053	7½	9¾
Bombay	42,891	1,29,161	6¼	9⅜
			& 7	
Bengal	1,35,297	1,97,223	9⅜	12½
			& 10½	& 15⅝
Behar and Orissa	10,671	1,19,502	12½	12½, 15⅝
				& 18¾
United Provinces	74,106	1,71,246	12	15
Punjab	82,676	8,34,295	6 to 9	9 to 12½
Burma	1,74,267	2,51,234	10	15
Central Provinces	9,632	1,15,204	9	12
Assam	7,658	26,046	6¼	12½
			& 9	& 18⅝
Coorg	3,021	9,418	5 to 8	12½
				& 25
Ajmer	6,924	85,400	10	12
Mysore	14,473	98,737	6 to 7½	9 to 12
Baroda	6,103	33,406	4½ to 7	9¾
TOTAL ..	6,42,193	17,75,815	....	....

The progress of the movement in different provinces varies according to the activity in organisation work as well as the special conditions of each province—the prevailing rates of interest being the most important of these. A few Indian States have also introduced legislation similar to the Co-operative Societies' Act in their territories and the most prominent of these are Mysore and Baroda. Hyderabad, Patiala, Travancore, Cochin, Gwalior and Indore have only very recently introduced co-operation in their States. The results of the experiment have been as satisfactory as in British India.

Main defects.—The main defects of primary societies may be summarized. The most prominent is the evil of unpunctuality. This is due more to easy going ways of life and the narrowness of margin between income and expenditure rather than to recalcitrancy. Next is the frequent apathy of the members in the work of the societies owing to lack of education and absence of higher ideals. The general body leaves affairs at the mercy of the committee and the committee transfers its powers to the Chairman, secretary or some other member. Then there the objectionable practice of making book adjustments and taking *benami* loans. A grave defect is the inability of the societies to act as real banks, receiving money when presented and granting loans on demand according to actual requirements. In many a society, activity is displayed only twice in the year, once during the cultivation season when loans are advanced and again after harvest time when recoveries are collected. The only remedy is better education and more guidance.

Non-agricultural societies.—Just as rural societies are the means of improving the conditions of life for agriculturists a class of society called the non-agricultural societies, has grown in towns and cities for improving the economic and moral condition of persons engaged in handicrafts and cottage industries, of artisans and small traders, members of particular castes and employees and of big firms and Government departments. Non-agricultural societies, except those for handicraftsmen, artisans, and persons of the poorer classes, referred to later, have usually a limited liability. This is due partly to the absence of any assets in real property among their members, but mainly to the field of their work not being compact as in the case of agricultural societies, where every member may be expected to know every other member. Their constitution is based on the 'Schulze Delitzsche' model and in most cases the management is honorary, though sometimes, when the sphere of society's work is extended, a paid staff is employed. There is in all societies a substantial share capital, payments being made in instalments, and the rest of the working capital is obtained by local deposits from members and others. Loans from co-operative and Joint Stock Banks usually form only a meagre portion of the capital. Of the total working capital of roughly Rs. 1,47,00,000 Rs. 30,00,000 represent loans and deposits from non-members, Rs. 1,41,000 loans and deposits from other societies, Rs. 12,01,000 loans from Provincial or Central Bank, Rs. 41,00,000 deposits from members, Rs. 51,00,000 share capital, Rs. 9,21,000 reserve fund and Rs. 57,000 State aid. At the end of every year one-fourth of

the net profits must be carried to the reserve fund and the balance may be distributed as dividend or bonus. There are a few serious drawbacks in the working of these societies and complaints about them are noticeable in many of the Registrars' annual reports. The most serious of these complaints are that the spirit of co-operation is lacking in many non-agricultural societies, that there is too great a desire to go in for profits and dividends and a growing tendency to make the societies close preserves once they have started running on profitable lines. The rates of interest on loans are at times higher than they ought to be, and the men at the head of the societies are loth to admit new members who are in need of loans for fear of the latter cutting down the profits.

Included in this group are communal societies, and societies of employees of firms, railway companies, and Government offices. There are again, a few societies organized on the lines of village Popular Banks of Europe to assist small non-agricultural traders and artisans in towns and there are also some societies comprising members of particular communities. Some of the larger non-agricultural societies, after meeting the needs of their members, have large balances on hand, which they are allowed, with the previous sanction of the Registrar, to advance t smaller primary societies.

With the growth of industrialism and th development of cities an important labourin class has grown up in big industri towns and this class is as deeply i debted and as badly remunerated as th agriculturists. Co-operation, if introduce among people of this class, would open a ne life to them besides being the means of the economic regeneration. No systematic effor have hitherto been made in this direction, urban co-operation has so far been confine more or less to middle class people. The fir experiment was initiated in Bombay under t auspices of an organization known as the De Redemption Committee. 19 mill hands a sweepers' societies have been organised and the have been successfulin redeeming the old deb of some 500 members. Some work in this dire tion has also been done in Madras, particular among the depressed classes. The Soc Service League of Bombay has also late started several promising societies amo factory workers. But the number of su societies should be multiplied a hundre fold among all classes of working men so t if successful, they may become the forerunn of a healthy Trade Unionism in India.

Progress of Non-agricultural Societies.—The following statement shows the progr of Non-agricultural Co-operation up to the end of the year 1916-17:—

Provinces.	Number of Societies	Number of Members	Total Working Capital.	Reserve Fund.	Cost of Management.	Net Profit during the year.	Usual rate of Interest on	
							Lendings.	Borrowings.
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras ..	224	43,001	29,42,894	1,74,178	75,462	1,02,758	6 to 9	
Bombay ..	182	47,695	43,90,145	1,82,958	56,197	1,62,700	6 to 6¼	9 to 1
Bengal	169	25,582	25,64,868	1,28,742	30,037	1,21,114	6¼ to 10½	9 to 1
Behar and Orissa ..	65	10,106	3,01,056	14,438	8,368	11,673	6¼, 9⅜, & 12½	9⅜ to 1
United Provinces ..	179	6,921	4,91,427	49,989	9,802	19,363	6 to 12	1
Punjab ..	37	4,228	3,17,133	49,353	14,558	15,726	8	1
Burma	54	5,002	8,35,568	1,54,815	12,107	69,613	..	..
Central Provinces ..	105	2,319	4,35,607	15,249	2,341	7,258	9	1
Assam ..	19	2,011	2,18,297	16,239	3,847	10,155	6¼	9 to 1
Mysore ..	144	27,893	20,87,782	1,30,132	30,389	1,31,559	5½ to 6½	9 to 1
Baroda ..	31	1,950	1,31,578	4,973	2,309	3,467	3¾ to 4½	6¼ to
TOTAL ..	1,209	1,76,708	1,47,16,355	9,21,013	2,45,411	6,56,379	..	..

Loans advanced.—The total amount of loans advanced to members by agricultural and non-agricultural societies during the year 1916-17 were Rs. 2,27,92,656 and Rs. 1,11,32,202, respectively, as against the total of less than Rs. 25 lakhs issued by both these classes of societies in the year 1906-7. Reports from all the Provinces do not give statistics regarding the objects for which loans are advanced, but from those published in some of the Provinces, it appears that the percentage of loans given for cultivation expenses by agricultural societies is 7 in Madras, 10 in Bengal, 16 in Behar and Orissa, 9 in the Punjab and 22 in the Central Provinces, and that loans for purchase of cattle form 10, 8, 16, 20 and 30 per cent of the total amount of loans advanced in the respective Provinces. Loans for repayment of Old debts are frequent, as is apparent from the fact that in Madras they form 41% of the total amount of loa s given, in Bengal 35%, in Behar and Orissa 31%, in Punjab 17%, and in the Central Provinces 15%. As the movement progresses, it is being more and more realised that the early clearance of a member from previous debts after his admission to a society is very desirable and greater attention is being bestowed by the Registrars on this question. It is impossible to insist on the restriction of loans to productive objects and there are circumstances under which unproductive loans are permissible and even advisable. What should be and generally is borne in mind is that precautions are taken by societies that the expenditure is inevitable and that it is not excessive in amount. The chief objects of the loans advanced are cultivation expenses, purchase of live-stock, fodder, seed, manure and agricultural implements, payment of rent, revenue or irrigation dues, land improvement and sinking of wells, purchase of new lands, and personal maintenance in times of scarcity in agricultural societies, and for purchase of raw materials for industries, or trade, for house-building and for food and other necessaries of life in non-agricultural societies. The terms of the loans are one year or less on those for current needs, whether for agriculture or petty trade, and up to five years or so on loans for liquidation of old debts or for land improvement. The percentage of the loans repaid by the members of agricultural societies in 1914-15 to the total amount of loans outstanding in 1913-14 and advanced in 1914-15 was 27, the average for the last four years being 30 per cent. An unsatisfactory feature of the co-operative system in some of the Provinces is the laxity and unpunctuality in the matter of repayment of loans by members and a general apathy in the matter on the part of societies. The amount of loans overdue from members at the end of the year 1914-15 stood at 17 per cent. of the total outstandings due to societies. As co-operation is both financially and educationally a failure unless promptitude of payment is assured, no efforts are spared by organizers to educate societies in this respect. The Co-operative Societies' Act grants to societies priority of claim against other creditors (except the State or the landlord) to enforce any outstanding demand due to the societies from members or past members upon the crops or other agricultural produce, and upon the cattle, fodder or agricultural implements, in cases where loans have been advanced for the purposes specified. But not content with this, some co-operators have pleaded for special powers of recovery of loans under which overdue loans may be recovered as arrears of land revenue. Most local Governments have framed rules under the Act enabling the Registrar to refer disputed claims to arbitration and to enforce the award of the Registrar in the same manner as a decree of the Civil Court. It is not likely that Government will sanction a special process under which claims against defaulting members may be recovered according to procedure allowed for the recovery of arrears of land revenue. For the existence of a special privilege of this character cannot but lead to laxity in the selection of members and carelessness in the granting of loans and in securing regular repayments on them. A special procedure for the recovery of the dues of a cancelled society stands on a somewhat different footing and the Local Governments of Bengal, and Bihar and Orissa have already passed enactments enabling the contribution levied by the liquidator of a cancelled society to be collected in the same manner as arrears of land revenue on an application being made in that behalf by the Registrar of Co-operative Societies. Legislation on similar lines is contemplated in Bombay, the Central Provinces and the United Provinces.

The Financing of Agricultural Societies.—As soon as the initial stage of the movement had passed, a very urgent problem had to be faced. This was to finance the agricultural societies that were growing in all directions. And the problem was solved in different provinces according to the special conditions and the stages of development the movement had attained therein. In Madras a Central Bank, which lent to Co-operative Societies in the Presidency, was started without Government aid as early as in 1907. This was followed by the starting of banks at district head-quarters. In other Presidencies, District and Taluka Banks were established making good the deficiency in the local capital of the societies within their districts, and in some places Joint Stock Banks were persuaded to make advances direct to agricultural societies or through the medium of local Central Banks. A large number of prosperous non-agricultural societies, as stated above, could afford to lend to agricultural societies. Government aid was also freely given and the advances under this head rose from Rs. 2,84,738 in 1906-07 to Rs. 9,34,663 in 1911-12. With the progress of the movement however, this aid was discontinued. In Bombay there was no movement to start local financing agencies and the very slow progress of the movement made it difficult for central banks with a restricted area of operations to work successfully. When owing to the unwillingness of commercial Banks to participate in the movement and the impossibility of continuing the grant of Government loan to an unlimited extent, the Registrar found it extremely difficult to have even the small number of societies in the Presidency properly financed, Sir Vithaldas Thackersey and the Hon. Mr. Lalubhai Samaldas

submitted to Government a scheme to establish a Central Bank for the Presidency, provided certain assistance was promised by Government. As a result of the negotiations that followed, the Bombay Central Co-operative Bank was founded in October 1911, with a share capital of Rs. 7 lakhs and with power to issue debentures at 4 per cent. up to three times the amount of the paid-up share capital, the Government guaranteeing payment of interest on the debentures till their repayment. The Bank was authorised to lend only to registered co-operative societies in the Presidency with the previous sanction of the Registrar in the case of every individual loan. As an indirect result of the establishment of the Bombay Central Bank, a number of District Banks have since been started in the Presidency.

The drawback of the Bombay and the Madras Central Banks is that neither is a co-operative Apex Bank in the true sense of the term. In the Bombay Central Bank Co-operative Societies are now encouraged to become members and may be expected gradually to assist in shaping its general policy. The Madras Central Bank has been recently converted their Bank into a Provincial Bank on sound co-operative lines. A Provincial Bank with three Central Banks affiliated to it is in existence in Upper Burma, and this Bank finances primary societies either through the affiliated local banks or through the guaranteeing of unions composed of societies. An Apex Bank has been started in the Central Provinces to form an immediate link between the District Banks in the Province and the Commercial Banks in Allahabad and elsewhere. It has worked well and its success led to the establishment of a Provincial Bank with a similar constitution in Bihar and Orissa. A scheme has also been set afoot for having a Provincial Apex Bank in Bengal, where, as also in Bihar and Orissa, the primary societies are at present financed by Central Banks at district or *taluka* head-quarters. A Provincial Federation of Central Banks has for the present been started transferring to itself the deposit liabilities of local banks, and distributing these according to requirements. The Federation also acts as the balancing centre for the provinces and provides fluid resource to affiliated banks. In the United Provinces primary societies are financed on the same system, and there, too, the starting of a Provincial Apex Bank under which Central Banks will be federated is under contemplation. The Punjab has a Central Banking system and though sooner or later it, too, will have an Apex Bank, no definite proposal for the establishment of such Bank has yet matured. A provincial union has however been recently started which will work as a financial federation for the local banks in the province and facilitate mutual aid between them till an Apex Bank comes into being.

The Working of Central Banks.—The following statement shows the number and the constitution of the Central Banks in the country up to the end of the year 1916-17:—

Provinces.	Number of Societies.	Number of Members.		Total Working Capital.	Reserve Fund.
		Individuals.	Societies.		
				Rs.	Rs.
Madras	13	852	1,094	50,89,908	51,679
Bombay	7	1,254	240	4,32,251	9,587
Bengal	47	4,096	2,872	58,89,950	1,46,008
Behar and Orissa	21	4,085	1,231	18,41,480	58,474
United Provinces	58	4,932	3,058	64,18,408	5,50,956
Punjab	41	1,941	2,532	54,42,346	2,10,421
Burma	3	293	449	10,87,732	17,308
Central Provinces	31	39,711	3,238	50,51,622	78,211
Assam	9	798	98	3,76,866	16,606
Ajmer	5	735	337	10,36,544	29,019
Mysore	17	621	304	10,10,492	20,267
Baroda	4	131	197	2,85,050	3,724
TOTAL ..	256	56,449	15,350	3,39,57,629	11,92,257

The Working of Central Banks.—The following statement shows the number and the constitution of the Central Banks in the country up to the end of the year 1916-17 :—*continued.*

Provinces.	Cost of Management.	Net Profit during the year.	Usual Rate of Interest on	
			Borrowings.	Lendings.
	Rs.	Rs.		
adras	17,267	68,991	5½ to 7	7½
ombay	4,211	11,415	2 to 6	6 to 9⅜
engal	70,844	1,20,715	6 to 7½	9⅜ to 12½
ihar and Orissa	42,037	57,121	7 to 8	12½
nited Provinces	1,33,597	77,862	6 to 10	12
unjab	23,981	1,53,436	5 to 8	8
urma	6,901	23,728	7½	10
ntral Provinces	45,614	1,04,926	6 to 7	9
ssam	2,779	14,262	6¼	9
jmer	6,118	32,335	6 to 8	10
oorg	2,854	24,601	6 to 7	7½
oda	2,670	3,719	4 to 6	6¼ to 9
TOTAL ..	3,58,878	6,93,111	....	....

The figures for Provincial Banks for the year are given separately as follows :—

Provinces.	Number of Members.		Total Working Capital.	Reserve Fund.	Cost of Management.	Net Profit during the year.	Usual Rate of Interest on	
	Societies.	Individuals.					Borrowings.	Lendings.
			Rs.	Rs.	Rs.	Rs.		
ras ..	....	332	36,57,778	1,00,000	18,984	76,007	5 to 6	
bay ..	151	801	22,84,945	16,814	27,031	38,009	5 to 6	7 to 7½
r and Orissa.	26	91	4,13,875	7,502	3,182	5,142	5 to 8½	7 to 12
na ..	1,456	438	48,29,170	79,594	24,655	21,329	6½	10
ral Provinces.	....	106	24,21,677	42,000	6,049	26,652	5 to 6	
re ..	436	631	3,95,107	600	2,937	8,455	6	7
TOTAL ..	2,069	2,327	140,03,552	2,40,510	82,838	1,25,594	....	....

The constitution of Central Banks is not uniform, but the existing Banks may be classifie under three general heads :—(1) Banks of which the membership is confined to individuals o where societies are admitted as members on exactly the same footing as individuals, (2 Banks of which the membership is confined to societies, and (3) Banks which include so cieties and individuals as their members and secure to societies separate representation o the Board of Directors. The number of central societies in the various Provinces falling und each of the three and other classes described above are roughly as shown below: —

Provinces.	Pro-vincial Banks.	Capita-list Central Banks. (1)	Pure Central Banks.	Mixed Central Banks. (2)	Supervis-ing and Guaran-teeing Unions. (3)	Pro-vincial Unions.	Total
Madras	1	1	1	11	56	1	71
Bombay	1	..	1	6	22	..	30
Bengal	..	1	5	41	13	..	60
Bihar and Orissa	1	..	2	19	5	..	27
United Provinces	..	..	7	51	1	..	59
Punjab	..	1	18	22	..	..	41
Burma	1	..	..	3	207	..	211
Central Provinces	1	..	..	31	186	1	219
Assam	..	3	..	6	3	..	12
Ajmer	..	..	..	5	..	..	5
Mysore	1	..	..	17	..	..	18
Baroda	..	..	1	3	..	..	4
TOTAL ..	6	6	35	215	493	2	757

Functions of Central Banks :—The functions of Central Banks are to balance the funds of Societies and to supply capital. But their duties are not limited to the provision of banking facilities only, but often include the organisation and supervision of societies. Hence where the Central Banks are not formed on a capital basis, they perform the functions of supervision and control of the Societies affiliated to them, and in some Provinces they also organise new Societies and even take up the entire educational work now done by the Registrar. Usually the Central Banks is only possible for the whole of a district, as the personnel necessary for its successful working would be difficult to secure in a smaller area. However, in different parts of the country we notice the existence of Central Societies for *talukas* and occasionally for smaller tracts. The creation of such bodies has been facilitated by the amended Co-operative Societies' Act, which come into force in 1912. Previous to the passing of this Act, Central Societies were started unsystematically in various Provinces according to local ideas, but their formation has been made uniform by the new Act insisting on a limited liability in the case of a society of which a member is a registered society. An important class of institutions included under the statistics of Central Societies are unions which may be described as federations of societies which are maintained for supervision, either combined or not with the assessment or guarantee of loans to primary societies, which do not undertake banking busin These unions have a very restricted area operations, within a radius of five to e miles from a central village. They are accep as integral parts of the provincial organiza in Burma and the Central Provinces, in case serving as a link between primary socie and the provincial bank and in the other ween primary societies and local banks. system has also been extended to Bomb Bengal, and Madras, though in the last nam province no guarantee is undertaken by th bodies.

Organization and Propaganda :—It be mentioned that in most of the provinces work of organising and looking after societies is done by the Registrar with help of assistants and a few honorary official workers. Where the Central B system has properly developed, the Direc of the Central Bank either themselves through a paid agency organise societies as stated above, supervise their working. number of honorary workers is stea increasing and in some Presidencies there staff of specially-appointed honorary organi who regularly assist the Registrars. The however, scope for organisation soci federations on the lines of similar institu in Germany, England and Ireland. federations should carry on active educat

propaganda and through the agency of local committees and groups of workers assist in the organization of new societies and attend to their supervision. Arrangements should also be possible for the carrying on the audit of societies, for which Government cannot continue to increase the official staff to an unlimited extent, on payment of some fixed contributions. Finally such federations should have the final voice in the determination of policy and subject to the statutory powers of the Registrar gradually take over the control of the co-operative organization in a province. In the Central Provinces there has been for some years a federation of Co-operative Banks which promises to develop into a truly co-operative organising and controlling agency. The federation provides a regular and efficient system of supervision, audit and control, arranges for the training of the federation staff, attempts to secure uniformity of practice among co-operative institutions and to promote their interest and fosters the spread of co-operation by active propaganda. A Provincial Union has also been started in Madras, but its objects are mainly educational and propagandist. A Central Institute to focus the efforts of co-operative workers and to carry on propagandist work has lately been established in Bombay. The objects of this institution are to develop the movement in the Presidency, by promoting the study of co-operation and by co-ordinating the activities of several existing propagandist and organization agencies. The institute has no powers of control, though it is expected to ascertain and represent the views of co-operators on questions affecting the movement. Organization will be undertaken primarily in the City of Bombay. In Bengal a similar propagandist organization has been started with identical aims. A federation with a constitution more or less similar to that of the Central Provinces Federation has been lately registered in Bihar and Orissa, while in the Punjab a provincial union was organized during the year for conducting the audit of primary societies and undertaking general propagandist work. In Burma the audit of primary societies is conducted by a central committee consisting of important Departmental officials and representatives of co-operative institutions. Organization, supervision and propaganda are furthered by district federations of unions of primary societies. These are all recent developments and it is still too early to forecast on what lines the transfer of control to representative co-operative agencies will be carried out.

Other forms of Co-operation.—After the passing of the new Co-operative Societies' Act the application of co-operation to purposes other than credit was greatly extended, but it is only during the last few years that a general demand for productive and distributive, purchase and sale co-operative societies has exhibited itself. At the end of the year 1916-17, there were very few store societies in the country, the Madras Presidency claiming 15, of these. There are now stores in Behar and Orissa, 18 in Bombay, 2 in Baroda, 21 in Mysore, 4 in Bengal and 8 in United Provinces. Particular attention is being devoted in some provinces to the starting of stores for students living in hostels attached to Colleges. Two interesting types of non-credit institutions may be referred to here. One is a Co-operative Dispensary started at Futwo in Behar and another a Co-operative Printing Press organized at the district of South Kanara in Madras. In some Provinces efforts have been made to revive the ancient handicrafts of the country and cottage industries by organising Co-operative Societies for the workers. Many of these societies merely provide cheap credit, but in some places they undertake the supply of raw material and the sale of manufactured goods. An important industry which flourished in India before the introduction of machinery was the Handloom Weaving Industry, and efforts have been made to revive it by the formation of productive co-operative societies of handloom weavers. Most of the Weavers' Societies are not merely credit societies, but undertake the purchase of good yarn for members, and in some cases have store branches to sell the cloth produced by them. They have also been instrumental, prominently in Bombay, the United Provinces, and the Central Provinces, in introducing improved looms and methods amongst the conservative weaving classes. The number of these societies in Bombay is 33, in Bengal 17, in Madras 1, in the United Provinces 2, (excluding a large number of weavers' credit societies) in the Central Provinces 55, in Burma 4, in Assam 5, in the Punjab 13, in Behar and Orissa 8, in Baroda 11, and in Mysore 23. Other industrial societies to be found in very small numbers here and there are those for "gaolees" or milkmen, dyers, basket and brass workers in the Central Provinces, "Chammars" and "dhors" in Bombay and the Punjab, lacquerware workers, carpenters, wood carvers, blacksmiths and potters. One of the most interesting experiments in non-credit co-operation is the Carpenters' Workshop at Bareilly in the United Provinces. The Indian Industrial Commission in the course of their inquiries devoted some attention to the development of small and cottage industries and the possibility of reviving them by the introduction of co-operation. Their recommendations on this subject are not very definite. State loans for purchase of costly plant or machinery are however recommended and emphasis is laid on the necessity of arranging facilities for the marketing of products of home industries. The first step to industrial co-operation is to be taken by familiarizing workers with the principles of co-operative credit, though later on separate non-credit institutions would become necessary. Suggestions are made for technical guidance to workers, and the local departments of industries are advised to keep workers constantly informed about the demands of the markets. Organization of industrial societies is to be a function of local departments of industries, but as that will be engaged with problems of big industries, it is doubtful of the cottage and small industries will have much scope for development under the new regime.

Three Housing Societies have been started in Bombay and a Housing Association has been founded to encourage the formation of more such societies. There are ten Building Societies

in Madras and a few more in Mysore. The total number of non-credit societies, whether agricultural or non-agricultural, is only 450 exclusive of the cattle insurance societies shown separately. The following table exhibits the progress of other forms of co-operation in the different parts of the country:—

Type of Society.	Madras.	Bombay.	Bengal.	Bihar and Orissa.	United Provinces.	Punjab.	Burma.	Central Provinces.	Assam.	Coorg.	Mysore.	Baroda.	Total.
Purchase or Purchase and Sale. — Non-Agricultural	15	47	4	19	8	25	..	..	..	..	34	3	..	15
Purchase or Purchase and Sale. — Agricultural	12	16	6	..	1	..	..	..	..	..	4	..	..	3
Production .. — Non-Agricultural	2	2	..	..	..	..	..	..	..	..	..	..	..	
Production .. — Agricultural	..	9	1	..	..	..	1	35	..	..	3	2	..	5
Production and Sale. — Non-Agricultural	..	2	66	2	1	..	..	2	..	..	2	..	..	7
Production and Sale. — Agricultural	2	16	..	..	7	..	40	1	..	2	10	2	..	8
Others .. — Non-Agricultural	11	3	2	1	1	..	..	14	..	..	..	..	..	3
Others .. — Agricultural	..	1	..	..	..	..	10	..	..	..	3	..	..	1
GRAND TOTAL ..	42	96	79	22	18	25	51	52	..	2	56	7	..	4

Cattle Insurance.—The province of Burma is a pioneer in the matter of cattle insurance, and to support the village insurance societies which have been started in the province there has been organized a central re-insurance society, which receives some financial backing from Government. In other provinces co-operative insurance for cattle has made little or no progress. The figures for Insurance Societies are given separately.

Province.	Number of Societies	Amount of Risk insured.	Premium Collected.	Number of Animals.		Claims paid.	Funds in hand at close of year.
				Insured.	Lost.		
		Rs.					Rs.
Bombay	4	Engaged in	collecting	capital.			4
Bengal	1	45	9	2	..	..	
United Provinces ..	5	1,207	33	67	2	..	7
Coorg	10	4,563	4,606	565	143	1,604	5,0
Burma	324	3,04,848	15,758	9,135	146	3,517	18,4
TOTAL ..	344	3,10,663	20,406	9,769	291	5,121	24,3
Burma Re-insurance.	1	1,43,320	7,656	6,388	146	1,144	9,8

Agricultural Co-operation.—Agricultural societies have until recently been engaged only in supplying cheap credit to their members but there are various other fields of work to which they may extend their activities. Grain Banks may be started with advantage, receiving deposits in kind and allowing these to accumulate to be sold at profitable rates or distributed to the members in times of scarcity. Such Banks have been started in Bombay, Madras, and Bengal. Societies on a similar principle for the storage of fodder may assist in solving what is likely to become in the near future an important problem in rural economy. Another direction in which the co-operative principle is being adopted is the starting of societies for purchase of and distribution among members of good unadulterated seed. A number of small seed societies have been organized in the Bombay Presidency and in the Central Provinces and Berar, the work appears to have been particularly well organized. Societies for the co-operative purchase and sale of manure will also prove a great boon, and a few such stores have been established in Madras, Bengal and Bombay, the last named province having no less than 15.

Co-operative Societies for the joint sale of produce are becoming popular as co-operative credit thrives agriculturists become less dependent on local traders. While Burma led the way by starting societies for the joint sale of paddy, the most interesting developments in the direction have taken place in Bombay. Societies for the sale of agricultural commodities, chiefly cotton and jaggery have been started in several districts in the Deccan and the Karnatak. In addition Credit Societies and Central Banks, in many parts of the country again, arrange for the joint sale of produce. In some places Credit Societies undertake the joint purchase of agricultural implements for members, while in others separate registered societies are started for the purpose where the system of Central Banks has developed on right lines this work is taken over by these banks for the Societies affiliated to the Banks.

Efforts have been made in some parts of the country to solve the problem of milk-supply—to reduce the price and increase the purity—by starting co-operative dairies, composed either totally of gaolis or milkmen or the producers and the consumers together. There are 11 dairies in Bombay, 11 in Bengal, 2 each in Bihar and the United Provinces and the Central Provinces and 1 each in Mysore and Baroda. Co-operative creameries and ghee producing societies have also been started in one or two Provinces. Another interesting development is the starting of Cattle-breeding Societies in the Central Provinces and elsewhere. It is anticipated that these Societies will assist in supplying the keen demand that exists for bulls of good stock. Agricultural Stores have been worked with a certain amount of success in Bombay and Madras, and Supply Societies have been organized in Bengal and the Punjab. In several provinces there are Societies for rice-hulling, the manufacture of jaggery and for Co-operative Irrigation. Ginning on co-operative lines has also been attempted.

Government has of late made attempts to bring the co-operative movement in close touch with the Agricultural Department. Co-operation has already been successful to a considerable extent in redeeming the chronic indebtedness of the agriculturist, but if the improvement in his economic condition is to be permanent it is essential that he should be prevailed upon to adopt improved methods of production. The Agricultural Department does undertake propagandist work with this object, but its efforts have not proved as successful as they ought to be. A Co-operative Society provides just the effective agency to reach the agriculturists, and in many places societies have been the means of bringing home to the agriculturist the need for improved methods and have been made the centres for the propagandist activities of the Agricultural Department and District Agricultural Associations. As a result, a few societies have been enterprising enough to purchase modern agricultural implement, machinery recommended by the Department and to use the proper manures and the certified varieties of seeds. "Wherever agriculture and co-operation have experienced the assistance which each can derive from association with the other they are fast developing a truly organic connection." If the reorganisation of Indian agriculture grows apace with the spread of co-operation, there is no doubt that rural India will soon present a happier outlook than it does now.

Recent Developments in Policy.—In July 1914, the Government of India issued a lengthy Resolution on co-operation in India, surveying its progress in the country during the last ten years. Though the Resolution was optimistic in tone, it criticized impartially the drawbacks of this new movement in India. It particularly emphasised the urgency of a proper financial organisation of societies and stated that "the responsibilities introduced by the addition to the co-operative organization of central and provincial banks are of a serious character. To supervise the relations of such institutions with the money market on the one hand, and with their constituent societies on the other, is a task which requires a considerable degree of technical skill, and the administration of the whole co-operative movement in the stages above that of the individual society is a matter which must in the immediate future engage the serious attention of Government and of the people." In October, the Imperial Government appointed a Committee under Sir Edward Maclagan to examine whether the movement especially in its higher stages and in its financial aspect was progressing on sound lines and to suggest any measures of improvement which seemed to be required, The enquiry was to be directed primarily to an examination of such matters as the constitution and working of Central and Provincial Banks, the financial connection between the various parts of the co-operative organization, the audit, inspection, and management of all classes of societies, and the utilization of the reserve funds. The scope of the enquiry was, however, in no way rigidly limited by the Government of India, for the Committee could at its discretion consider and make

recommendations regarding any important aspect of the co-operative movement. In its report, which was issued in September 1915, the Committee stated that it had not confined its enquiries to the subjects referred to it, for it had to recognise that the financial welfare of the higher stages of the co-operative system was largely based on the soundness of the foundation. At the outset it may be remarked that in view of the present preponderance in the number of agricultural credit societies and the similarity of the general principles which guide all classes of co-operation, the Report deals mainly with the institutions established for providing agricultural credit.

Main Recommendations.—In treating of primary societies the report points out the extreme care necessary in the formation of new societies and urges the importance, from the standpoint of efficiency and financial stability, of systematically inculcating the main principles of co-operation. Stress is laid on the encouragement of thrift, and the Committee thinks that every effort should be made to increase the amount of local deposits in societies. It is recommended that the bye-laws of societies should be so framed as to allow the Annual General Meeting to assess and fix every year the total borrowing power of the Committee and the normal maximum borrowing power of each member. The Committee advocates the taking of sureties in all cases and the rigorous exaction of the sureties' liability when necessary and deprecates an extensive use of mortgages. While advocating the full use of the existing law in respect of recoveries from members, it has refused to support the claim put forward for a summary procedure in the execution of decrees and strongly deprecates the use of Government agency for the recovery of debts due to societies. In the opinion of the Committee it is necessary for all co-operative institutions to build up a Reserve Fund in the sense of surplus assets, and to make every effort to accumulate an "owned" capital to supply their working needs and to meet the claims of creditors on liquidation. Stress is laid on the necessity in the case of primary societies which take deposits of providing for themselves either by their own investments or by arrangements with the financing institutions an adequate fluid resource. After satisfying the requirements in this direction, where necessary, primary societies should be left to utilize their surplus assets in their own business. The function of supervising the primary societies devolves, according to the Committee, on the societies and can best be carried out by a staff paid for by the societies and responsible to them as also to their financing institutions. These duties, it is added, can be performed most in conformity with true co-operative methods by the formation of guaranteeing Unions of societies on what is known as the Burma model. These Unions form a link between the financing agencies and the societies and bring the societies together most effectively for the purpose of mutual supervision, assessment of credit and recovery of loans. In the view of the Committee, a guaranteeing Union of some kind is advisable where the financing agency is a Central Bank, and essential in cases where a Bank dealing with a whole province attempts to deal with societies without the intervention of a Central Bank. Central Banks are at present of three classes according as their shareholders are all individuals, all societies, or some individuals and some societies, and while advocating the disappearance of the first class and the ultimate adoption of the second, the Committee believes that for the present the third or mixed form of constitution offers the best advantage. To balance the excesses and deficiencies in Central Banks and to supply them with funds it advocates the foundation at an early date of a co-operative institution at the head of each province which does not now possess one. These institutions too should in the Committee's opinion have a mixed constitution in which individuals and co-operative Banks should both be represented. In view of the peculiar nature of co-operative finance, the Committee recommends that the period of deposits accepted by co-operative institutions should ordinarily be as long as possible, but that only in very special cases where Central Banks are in a position to secure debentures on immoveable property should capital be raised by debentures. The necessity for building up an owned capital is emphasised as also the special necessity for central financing institutions to equilibrate their finances. The Committee comments on the absence of facilities for discounting co-operative paper and on the urgency, under the circumstances, of Central Banks maintaining fluid resources sufficient to meet half the deposits due for repayment within the next twelve months, a standard of one-third being sufficient in the case of Provincial Banks. As in the case of primary societies, central institutions too may after satisfying the requirements in this respect be left to utilize their surplus assets in their own business. The Committee recognizes that its recommendations regarding the fluid resource will entail a disarrangement of existing financial conditions and will in many cases involve a considerable raising of existing margins between the borrowing and lending rates. The Committee insists on the vital importance of proper audit and supervision. In the case of Central and Provincial Banks the audit of accounts should be done on payment either by professional or Government agency, the Registrar being responsible for the inspection and general supervision of these societies. For primary societies, the Committee thinks that the auditing staff may be divided into two sections (*a*) a staff maintained by Government for super-audit and (*b*) a staff maintained by co-operative institutions for original audit. The only prominent administrative concession recommended by the Committee is the introduction of a special procedure for recovery in liquidation. And another concession which may be much availed of if adopted is the suggestion that where loans under the Agriculturists' Loans or the Land Improvement Loans Act are being given by Government on a large scale it should be open to societies to receive such loans for distribution to their members. The Committee recognizes that with the growth of co-operation a new factor in district administration has come into being and therefore desires that the District

Officer be entitled to attend all meetings of Central Banks in his jurisdiction, though it deprecates the devolution to the District Officer of duties assigned under the Act to the Registrar, or any general arrangement for making him an ex-officio Chairman of the Central Bank at District Headquarters. The Committee recommends that two controlling officers should be employed in each province and that there should be a Registrar or Joint Registrar for every 1,000 or fraction of 1,000 societies registered. The Registrar should be a whole time officer and his post should be included as a Collector's post in the cadre of the Province, the special qualification for the post being that he should be well-versed in co-operative literature relating to all countries and should, if possible, have gained some personal experience of the subject in Europe. The Committee has examined a proposal for the co-ordination of certain economic departments including those of Co-operation, Agriculture and Industries under a single officer of high standing in each province and has recommended that a move be made in this direction as opportunity offers. The need for closer control by Government over the objects for which the co-operative organization is utilized and over the financial arrangements of the movement is emphasised and to meet the latter it is suggested that an officer with co-operative experience be appointed to act as Adviser to the Local and Supreme Governments. The Committee has finally examined the effect on the co-operative movement of recent famines, of banking crisis, and of the present war, and states that the Government has hitherto given direct financial aid to co-operation in three ways, only, *viz.*, (1) by the grant of initial advances to new societies, (2) by guaranteeing the interest on the debentures of the Bombay Central Bank and (3) by special advances in two Provinces to meet difficulties anticipated in connection with the war. The Committee expresses its concurrence with the present policy of Government so far as it represents a rejection of the system of money doles and of undue concessions, but points out that in order to make the movement self sufficing it will be necessary to provide some means of rediscounting the pro-notes of societies either through the Presidency Banks or by means of a State Co-operative Bank and recommend that a careful examination be made of this question. The recommendations of the Committee are under consideration by Government.

Government Action.—The minor recommendations made have already been given effect to, but the opinions of the Local Governments were invited on the important ones. These opinions were published by the Government of India in September 1917 in response to a demand in the Imperial Legislative Council. The Government of India has not passed orders on the recommendations in the light of the opinions of the Local Governments. The views of the Local Government differ very widely and clearly showed that a uniform system cannot be introduced in provinces with diverse conditions. The prescribed standard of fluid resources is condemned by some provinces, others object to the use of the Reserve Funds by societies in their own business, and a majority disapprove of the proposed appointment of an expert co-operator with the Government of India. While practically all approve of a summary process of recovery for the dues of members of societies in liquidation. Several provinces have already decided to take action on such of the recommendations as are approved of by the Registrars and are suitable to local conditions. With a view further to elicit opinion on the recommendations, a special conference of the Registrars was convened in August 1918, to which all the Registrars and a few selected non-official co-operators were invited. The Conference passed several important resolutions, adopting the Committee's suggestions about the utilization of reserve funds and the acceptance of savings deposits by primary societies and disapproving generally of the recommendation about the standard of fluid resource to be maintained by central institutions. The Conference also had under consideration the suggestion made by the Committee on co-operation that as the financing of the movement involved grave difficulties which baffled solution unless the discounting of pro-notes arranged through an Imperial State Bank or the several Presidency Banks, a careful examination of the question was immediately called for. A proposal was made for the appointment of an expert Committee, but the Government of India have practically shelved it by insisting that they would assemble the Committee, at some date convenient to them.

Effect of Crisis on Co-operation.—It is hardly possible to appreciate the effect of the co-operative movement in enabling the agriculturists to resist the rigours of a famine as also to judge the reaction of the latter on the co-operative organisation. For, after the introduction of the co-operative movement in India, the country has not been affected by any widespread famines like those through which the greater portion of the country passed in 1898-1900. The agricultural season of 1918-19, however, will put the co-operative orgainsation in most provinces to a very severe test. There has, occasionally been scarcity verging on famine in Bombay and the United Provinces but in neither of the two provinces was the distress sufficiently crushing or widespread to render the assistance provided by the societies inadequate for the needs of members. With a better appreciation of the dependence of the agriculturist on seasons, and a more systematic management of the funds of Central Societies it is anticipated that in future the situation arising out of a failure of rains will be satisfactorily met. In 1913 and the following months practically the whole of the country was subjected to a banking crisis of considerable magnitude, but a marked feature of this crisis was a tendency to withdraw deposits from non-co-operative institutions and place them in co-operative banks. The outbreak of the War brought another set of influences into play and there was a temporary tendency to withdraw deposits and a temporary cessation of new deposits. The disturbance was not serious except in two or three provinces and by the end of the year 1914-15, the situation became practically normal. In two of the provinces where the situation caused some anxiety owing

to the cessation of fresh deposits in Central Banks, the Government sanctioned advances to the extent of Rs.5,00,000 to Central Societies to be utilized in case of urgent loans to agricultural societies or to meet withdrawals of deposits. On the whole, therefore, the movement appears to have stood the test of the War much better than might have been expected. While therefore the co-operative movement has a whole been the cause of little or no anxiety to the public as well as to the State, Co-operative institutions in several provinces have borne their share of the burden of the War to the best of their ability. In the Punjab a War Hospital was maintained by Co-operative Societies in one district and Societies in all parts of the province contributed largely to various War funds and charities and different relief funds. Large subscriptions to the War Loan were made in Bengal, Bombay, the Central Provinces and the United Provinces.

Defective Education.—It is the experience of those who have to deal with the organisation and management of rural societies that the sad state of education among the agricultural population is not only a real hindrance to the development of co-operation but seriously endangers its very existence. There are villages where no schools exist and where there is hardly one individual who can read and write tolerably well. In most villages a few literate people can be found and it is these that form the nuclei of co-operative societies. Their ignorance in other matters is often so abysmal that it is hardly possible to instil into their minds even elementary notions of co-operation. Happily there are villages which are better off, where a decent percentage of the population is able to read and write and where one finds a dozen intelligent men who can understand the elements of co-operation. In a large number of societies, as has been pointed out previously, the secretaries who are the real managers are not *bona fide* members. This, it may be urged, is contrary to a fundamental principle of co-operation that there should be internal management of the business, but it can scarcely be helped in a country where there are only a few among the total village population able to keep their own accounts much less to undertake the management of a society. It is true that co-operation provides a higher type of education, but when the ground work itself is lacking, it is impossible to build up the superstructure.

Social Reform.—Co-operation has, in some places, stimulated the desire for education and members of rural societies have been known even at advanced ages to receive the elements of education to enable them to put their signatures on the society's papers, and to take a lively interest in the internal work of their societies. There are a few cases where a society has set its face against drunkenness, expelled members notorious for their intemperate habits and has in other ways worked for a better morality by insisting on a high standard of life. Societies have occasionally condemned excessive and even heavy expenditure on marriages, and have thus indirectly trained members to the habit of thrift. Liquidation of old debts again has been rendered possible to a great extent and many an agriculturist who was formerly in a state of chronic indebtedness has been relieved of all his debts and freed from the necessity of incurring new ones. Credit has been much cheapened and it is now possible for the agriculturist to borrow at 9 to 18 per cent. what he could not borrow at less than 20 to 75 per cent. formerly. It has been calculated that in interest alone the agriculturists of India, by taking loans from Co-operative Credit Societies instead of from the village money-lenders, are even now saving themselves from an unnecessary burden of at least 20 lakhs of rupees. The village rates of interest have naturally gone down considerably and the Sowkar is, in most places, not the terror and the force that he was. Business habits have been inculcated with the beneficial result that the agriculturist has learnt to conduct his own work more efficiently. Thrift has been encouraged and the value of savings better appreciated. Participation in the management of societies has brought home to the members the important lessons of self-help and self-reliance ; but the most important achievement of co-operation has been the instilling of a sense of communal life—a feeling of "all for each and each for all" amongst the members of a co-operative body. If these signs become as common as they are now rare, and if, over and above the economic benefits achieved by it, co-operation succeeds in its true aim—the building up of the character of the people and the promotion of their welfare by the inculcation of the ideas of thrift and the principles of self-help, and, above all, by showing the wisdom of mutual help and brotherliness amongst the neighbours—a resuscitation of rural life such as is conducive to more quickened national progress will not be far off.

The Women's Medical Service for India.

This Service which was recently inaugurated under the auspices of the late Lady Hardinge, it included in the National Association for supplying female medical aid to the Women of India, generally known as the Countess of Dufferin's Fund and is administered by the Central Committee of that Fund. The Government of India has so far allotted the sum of £10,000 per annum towards its maintenance. The present sanctioned cadre is twenty-five first class medical women, of which number five is for the purpose of forming a leave reserve. Recruitment of the service is made (*a*) in India by a medical sub-committee of the Central Committee which includes the Director-General, Indian Medical Service, the Honorary Secretary to the Central Committee, and a first-class medical woman; (*b*) in England, by a sub-committee, consisting of a medical man and two medical women conversant with conditions in India, to be nominated by the Home Committee of the Countess of Dufferin's Fund. These sub-committees perform the duties of a medical board examining candidates for physical fitness, and for return to duty after invaliding.

The Central Committee determines what proportions of the members of the Service is to be recruited in England and in India respectively. In the original constitution of the Service, duly qualified medical women who are in the service of, or who have rendered approved service to, the Countess of Dufferin's Fund, are to have the first claim to appointment, and hereafter special consideration is to be paid to the claims of candidates who have qualified in local institutions and of those who are natives of India.

Qualifications.—The qualifications are that the candidate must be (*a*) a British subject resident in the United Kingdom or in a British Colony or in British India, or a person resident in any territory of any Native Prince or Chief under the suzerainty of His Majesty exercised through the Governor-General of India or through any Governor or other officer subordinate to the Governor-General of India. (*b*) Must be between the ages of twenty-four and thirty at entry. (*c*) She must be a first-class Medical Woman, *i.e.*, she must possess a medical qualification registerable in the United Kingdom under the Medical Act, or an Indian or Colonial qualification other than L.M.&S. or Licentiate of a Medical College. in India registerable in the United Kingdom under that Act: but this condition does not apply at the original constitution of the Service to medical women in charge of hospitals who, the opinion of the Central Committee, are of proved experience and ability. (*d*) The candidate must produce a certificate of health and character. But the Central Committee reserves the power to promote to the service ladies not possessing the above qualifications, but who have shown marked capacity. Members of the Service are required to engage for duty anywhere in India or Burma. Those recruited in England serve for six months, and those recruited in India for three months, in a General Hospital of the Province to which they are deputed. After this period of probation has been satisfactorily passed their appointments are confirmed. The services of Members may be lent to Local or Municipal bodies, or to special institutions, which may be responsible for whole or part of the pay.

Pay.—The rates of pay are as follows:—During probation Rs. 350 per month: thereafter Rs. 400 up to the end of the 4th year: Rs. 450 from the 5th to the 7th year: Rs. 500 from the 8th to the 10th year: and Rs. 550 after the 10th year. But no member can be confirmed in the 400 rupee grade unless she has passed an examination in such vernacular as the Provincial Committee shall prescribe, within one year of her appointment. In addition suitable quarters are provided free of rent: or a house rent allowance to be determined by the Provincial Committee may be granted in lieu of it.

Members of the Service are permitted to engage in private practice provided it does not interfere with their official duties, and the Provincial Committee has the power to determine whether such duties are thus interfered with. Except in very special cases retirement is compulsory at the age of forty-eight. A member whose appointment is not confirmed, or who is dismissed, is granted an allowance sufficient to pay her passage to England.

Leave Rules.—(*a*) Casual Leave, which is occasional leave on full pay for a few days, and is not supposed to interrupt duty. (*b*) Privilege Leave, which is leave on full pay and is meant to provide a month's holiday in the year. If it cannot be granted during the year, it can be accumulated up to a limit of three months. (*c*) Furlough, at the rate of two months for each year of duty, the latter including privilege leave and casual leave. First furlough is not granted till after four years of duty, and more than eight months furlough is not granted at one time. Study leave may also be granted not exceeding three months at a time and up to nine months during the whole service. (*d*) Sick leave, up to a maximum of two years. (*e*) Extraordinary leave at any time at the discretion of the Central Committee. When on furlough or sick leave the allowances are half the average monthly pay of the six months presence on duty immediately preceding the taking of the leave. There are no allowances during extraordinary leave. A Lady appointed in England receives a sum of £70 to cover her passage and incidental expenses. There are also allowances to cover the cost of journeys by rail and road.

There is also to be a Provident Fund, each member contributing monthly thereto five per cent. of her salary, the Association contributing an equal amount, and each subscriber's account being granted interest on the amount standing to credit at the rate of 4 per cent. per annum, "or at such rate as the Central Committee can invest without risk to the funds of the Association."

The Member loses her contributions if she resign (except on account of ill-health) before completing five years' service, or in the event

of dismissal. On retirement after approved service the sum which has accumulated to the credit of the subscriber is handed over to her.

Lady Hardinge Medical College.—On February 17, 1916, a medical college for women was opened in Imperial Delhi. The scheme for this College was initiated by the late Lady Hardinge. She took a very keen interest in its development and it is due to her efforts that the greater part of the 22 lakhs needed for its completion was obtained in subscriptions from Indian Princes and Chiefs.

The object of the institution is the training of Indian girls of good class to become doctors. The College and hospital will be staffed entirely by women of good professional requirements and will be chosen from the Women's Medical Service members.

Students joining the college will be required to have passed either the Intermediate Arts or Science Examination of one of the Indian Universities. The College curriculum will include courses in Chemistry, Biology and Physics. University graduates from England have been appointed as Professors of these subjects. A certain number of scholarships will be awarded annually to deserving students.

The Lady Hardinge Training School for Nurses.—Attached to the Hospital which is designed to hold 168 beds will be a training school for nurses and midwives. It is intended to train Indian girls as nurses, who will be available for nursing in private families as well as in hospitals.

The following staff has been selected: Principal and Professor of Medicine, Dr. K. A. Platt, M.D., B.S., (London). Professor of Midwifery and Gynæcology, Miss Holton, M.B., B.S. (London). Professor of Pathology, Miss Field, M.R.C.S., L.R.C.P. Professor of Anatomy, Miss Murphy, M.B. (Calcutta), M.R.C.P. and L.R.C.P. Professor of Physics and Chemistry, Miss A. M. Bain, M.A., B.Sc. (Aberdeen). Professor of Biology and Physiology, Miss M. R. Holmer, (First Class in the Natural Tripos, Cambridge). Superintendent of Nursing, Miss Mackenzie. Tuition began in September.

THE COUNTESS OF DUFFERIN'S FUND.

The National Association for supplying female medical aid to the women of India at once one of the most efficient as it is among the most useful and benevolent institutions in India, is the outcome of the work of the Countess of Dufferin and Ava during the time of her husband's Viceroyalty. The late Queen Victoria drew the attention of the Countess, on the departure of the latter for India, to the question of supplying medical aid to women in this country, and asked her to take a practical interest in the subject. As the result of her enquiries she found that, though certain great efforts were being made in a few places to provide female attendance in hospitals, training schools, and dispensaries for women, and although missionary effort had done much, and had indeed for many years been sending out pioneers into the field, yet taking India as a whole, its women, owing to the "purdah" system, were undoubtedly without that medical aid which European women were accustomed to consider as absolutely necessary. In the Countess' own words written in 1886 after the movement had been started: "I found that even in cases where nature, if left to herself, would be the best doctor, the ignorant practice of the so-called midwife led to infinite mischief, which might often be characterised as abominably cruel. It seemed to me, then, that if only the people of India could be made to realise that their women have to bear more than their necessary share of human suffering, and that it rests with the men of this country and with the women of other nationalities to relieve them of that unnecessary burden, then surely the men would put their shoulders to the wheel and would determine that wives, mothers and sisters, and daughters dependent upon them should, in times of sickness and pain, have every relief that human skill and tender nursing could afford them.....I thought that if an association could be formed which should set before itself this one single object, to bring medical knowledge and medical relief to the women of India, and which should carefully avoid compromising the simplicity of its aim by keeping clear of all controversial subjects and by working in a strictly unsectarian spirit, then it might become national, and ought to command the support and sympathy of every one in the country who has women dependent upon him."

Initiation of the Scheme.—Lady Dufferin's plans were warmly received by the public all over India. The scheme was drawn out and published in the different dialects. The association was named "The National Association for Supplying Female Medical Aid to the Women of India," and the money for its support, as it was received, was credited to the "Countess of Dufferin's Fund." The affairs of the Association were managed by a central committee of which the Countess of Dufferin during her stay in India was President. Branch Associations, each independent for financial and administrative purposes, but linked with the central committee, were formed in most parts of the country, and the work may be said to have started from August 1885. The objects of the Association are thus set-forth in its publications.—I. Medical tuition, including the teaching and training in India of women as doctors, hospital assistants, nurses, and midwives. II. Medical relief, including the establishing under female superintendence, of dispensaries and hospitals for the treatment of women and children; the opening of female wards under women superintendents in the existing hospitals and dispensaries; the provision of female medical officers and attendants for existing female wards; and the founding of hospitals for women where specially

unds or endowments are forthcoming. II. The supply of trained female nurses and midwives for women, and nurses for children n hospitals and private houses.

Within four years from its inception there vere in existence twelve hospitals for women nd fifteen dispensaries, most of which were fficered by women, and all more or less closely onnected with the Association. From the ubscriptions collected there was enough to et aside a substantial sum as an endowment md; and also six medical, twelve nursing nd two hospital assistant scholarships had een provided for.

Growth of Scheme.—The first regular train-ig school in India for the instruction of ative pupils in medical and surgical nursing, nd in midwifery was established in 1886 by ie Bombay Branch of the Association in con-ection with the Cama Hospital in Bombay. his is a civil institution under Government anagement, and is solely for women and ildren of all castes and denominations. In nnection therewith is the Allbless Obstetrical ospital and the Jaffer Suleiman Dispensary r women and children. The present physician-in-charge is Miss **A. M. Benson, M.D.** (Lond).

There are thirteen Provincial Branches working under the central committee; and attached in some manner, or affiliated to the provincial branches, there are about one hundred and forty Local and District Associations or Committees engaged in furthering the work of the Association. There are one hundred and fifty-eight hospitals, wards, or dispensaries of various kinds for the medical relief of close on one and a quarter million women and children; and the value of the institutions engaged in the work of the Association was estimated at over 56 lakhs of rupees.

Annual Report.—The Report of the Association is published annually, and can be obtained either from the Superintendent of Government Printing, Calcutta, or from the leading booksellers, the price being one rupee. The map of India published therewith shows the centres worked by the Dufferin Fund uniformly scattered over the Indian Peninsula, and illustrates how the Association has taken root in the country. The Honorary Secretary is Lt.-Col. Sir James Roberts, I.M.S.

NURSING.

Whilst India cannot show the complete ain of efficiently-nursed hospitals which ists in England, there has been a great de-lopment of skilled nursing of recent years. his activity is principally centred in the ngal, Madras, and Bombay Presidencies, here the chief hospitals in the Presidency wns are well nursed, and where large private affs are maintained, available to the general iblic on payment of a prescribed scale of es. These hospitals also act as training stitutions, and turn out a yearly supply of lly trained nurses, both to meet their own mands and those of outside institutions d private agencies. In this way the supply trained nurses, English, Anglo-Indian and dian, is being steadily increased. In Bombay e organisation has gone a step farther, through e establishment of the Bombay Presidency rsing Association, c/o St. George's Hospital, mbay. This is composed of repre-ntatives of the various Nursing Asso-tions in charge of individual hospitals, d works under the Government. The nciple on which the relations of this Asso-tion with the Local Associations is governed that there shall be central examination and ntrol combined with complete individual onomy in administration.

Nursing Bodies.—The Honorary Secretary the Calcutta Nursing Association is Mr. A. B. Reynolds, the Presidency General spital. The address of the Mayo Hospital rsing Association is in Strand Road. In adras there is the General Hospital, with a ff of 62 nurses, the Government Maternity spital, the Caste and Gosha Hospital at lpauk, the Royappeta Hospital and the hthalmic Hospital.

Bombay Presidency.—The Bombay Presidency was amongst the first in India to realise the value of nursing in connection with hospital work. The first steps were taken on the initiative of Mr. L. R. W. Forrest at St. George's Hospital, Bombay, where a regular nursing cadre for the hospital was established together with a small staff of nurses for private cases. This was followed by a similar movement at the J. J. and Allied Hospitals and afterwards spread to other hospitals in the Presidency. Ultimately, the Government laid down a definite principle with regard to the financial aid which they would give to such institutions, agreeing to contribute a sum equal to that raised from private sources. Afterwards, as the work grew, it was decided by Government that each nursing association attached to a hospital should have a definite constitution, and consequently these bodies have all been registered as Associations under Act 21 of 1860. By degrees substantial endowments have been built up, although the Associations are still largely dependent upon annual subscriptions towards the maintenance of their work. The chief of these Associations are:—

St. George's Hospital Nursing Association. Secretary: D. W. Wilson, St. George's Hospital, Bombay.

J. J. Hospital Nursing Association. Secretary: A. G. Gray, Jamsetji Jijibhai Hospital, Bombay.

Gokaldas Tejpal Hospital Nursing Association. Secretary: Rahimtullah Currimbhoy.

Cama Hospital Nursing Association. Hon. Secretary: H. Macnaghten, Esq. Address—Cama Hospital, Bombay.

Sassoon Hospital Nursing Association. Address—Sassoon Hospital, Poona.

Ahmedabad and Lely Memorial Association. Address—Civil Surgeon, Ahmedabad.

After further experience it was felt that it is undesirable to have a considerable number of detached and independent nursing associations, training and certifying nurses, without any common standard of entrance examination, or certification. It was therefore decided to establish the Bombay Presidency Nursing Association which came into existence in the year 1910. This is an Association formed partly of representatives of all affiliated associations and partly of direct representatives of Government, the Surgeon-General with the Government of Bombay always being the chairman. It is financed partly from the product of endowments and partly from contributions from the Government of India. If subsequently further funds are needed they are to be provided by contributions from the affiliated Associations.

The principle on which the Bombay Presidency Nursing Association works is a central system of examination, certification, registration and control. It is now the only nursing, examining, registering and certifying body in the Bombay Presidency. At the same time, the local associations retain entire charge of their local funds excepting Provident funds which have been transferred to the Central fund, and also entire control of the nurses when they are in their employment. In a sentence, the principle is central examination and certification and local control. By degrees it is hoped to be able to establish the principle that none but nurses registered under or certified by this association shall be employed in any Government institution.

The Association commenced its operations on the 1st April 1911. The institutions recognized under the by-laws for the training of nurses at present are—St. George's Hospital, J. J. Hospital, Cama and Allbless Hospitals in Bombay, the Civil Hospital, Karachi, the H. and P. Civil Hospital, Ahmedabad, and the Sassoon Hospital in Poona, and the following for the training of midwives;—The Cama and Allbless Hospitals, St. George's Hospital and the Bai Motlibai Hospital in Bombay, and the Sassoon Hospital in Poona.

Provision for retiring allowances is made for all members on the basis of a Provident fund and a Nursing Reserve has been established for employment in emergencies such as war, pestilence or public danger or calamity.

Address—The Secretary, Bombay Presidency Nursing Association, c/o Greaves Cotton & Co., Bombay.

Lady Minto Nursing Service.—In 1905, there was one organisation existing in the Punjab and the United Provinces called the Up-Country Nursing Association for Europeans in India, which was established in 1892. This Association carried out very useful work in certain parts of India, but was hampered by want of funds. For this reason it was found impossible to extend their organization and the urgent need for a larger number of trained nurses at charges within the reach of all classes was much required. The late Lady Curzon worked energetically to provide an enlarged nursing organization, but principally for financial reasons, was unable before leaving India to bring her scheme to fruition. The Home Committee of the existing Association recognizing the need of expansion approached Lady Minto before she left England in 1905 and begged her assistance and co-operation. After much consideration and discussion with the Government of India, Lieutenant-Governors and Commissioners of Provinces, the present Association was established. In 1906 an appeal was made by Lady Minto to the public both in England and India to start an endowment fund. This appeal was most generously responded to. Each year the endowment fund has gradually increased, and with the assistance of a Government grant, homes for nurses have been established in seven Provinces of India and Burma, of which the original Association formed the nucleus. To avoid confusion with other Associations, the enlarged organisation, by request of the Home Committee, was named "Lady Minto's Indian Nursing Association," carrying on the same work as before, namely, that of selecting suitably trained nurses in England, and making the necessary arrangements for their transfer to India. Hon. Secretary, Lieut.-Col. Sir J.R. Roberts, C.I.E., I.M.S., Simla; Hon. Secretary, Home Branch, Lieut.-Col. Sir Warren Crooke-Lawless, Kilcrone, Cloyne, Co. Cork.

Nurses' Organizations.—The Trained Nurses' Association of India and the Association of Nursing Superintendents of India are not Associations to employ or to supply nurses, but are organizations with a membership wholly of nurses with the avowed objects of improving and unifying nursing education, promoting *esprit de corps* among nurses, and upholding the dignity and honour of the nursing profession. The Associations have a membership of 202, including nurses trained in ten or more different countries, Europeans, Americans, New Zealanders, Australians and Indians. The Association of Superintendents was started in 1905 as the Association of Nursing Superintendents of the United Provinces and the Punjab, but by the next year its membership had spread over the country to such an extent that the name was changed to include the whole of India. The Trained Nurses' Association was started in 1908, and a monthly Journal of Nursing began to be published by the two Associations in February, 1910. The Associations have since become affiliated with the International Council of Nurses.

Below are given names of Officers of the Associations:—

Trained Nurses' Association of India.

President, Miss Bartleet, Peach Cottage, Coonoor. *Hon. Secretary and Treasurer*, Miss Thacker, Cama Hospital, Bombay.

Association of Nursing Superintendents.

President, Miss Dent, Madras; *Hon. Secretary and Treasurer*, Mrs. Blackaby, South Ville, Colaba.

Stock Exchange.

There are about 365 Share and Stock Brokers in **Bombay.** They carry on business in the Brokers' Hall, bought in 1899 from the funds of the **Share and Stock Brokers' Association** formed to facilitate the negotiations and the sale and purchase of Joint Stock securities promoted throughout the Presidency of Bombay. Their powers are defined by rules and regulations framed by the Board of Directors and approved by the general body of Brokers. The Board has the power to fix the rates in times of emergencies. It is composed of Sir Shapurji Broacha (Chairman), Mr. Parbhudas Jivandas (Vice-Chairman), Mr. Maneckjee Pestonji Bharucha, Mr. Shapurjee Sorabjee Mahimvala, Mr. Nasserwanji Pherozesha Karani, Mr. Nagji Motichand, Mr. Hirachand Vasanji, Mr. Bhaidas Goculdas, Mr. Vadilal Punamchand and Mr. Jamnadas Morarji (Secretary).

At first the admittance fee for a broker was Rs. 5 which was gradually raised to Rs. 1,000. The fee for the Broker's card has increased and it was recently sold at Rs. 6,000. The rules of the Association were revised in October 1916 and from the New Year the purchaser of shares has to pay the stamp and transfer fee instead of the seller. There are two classes of Exchange Brokers, Europeans and Indians, the latter being certified for recognition by the native Stock Exchange. Business in Government Paper and all other Trustees' Authorised Securities is carried on under the rules of the Bombay Stock Exchange, but in the street outside the hall.

In November 1917 a second Stock Exchange was opened in Bombay, with its headquarters in Apollo Street. The directors of this exchange, known as the **Bombay Stock Exchange, Ltd.,** are The Hon'ble Mr. Purshotamdas Thakhordas, C.I.E. (Chairman), The Hon'ble Mr. Chunilal V. Mehta, The Hon'ble Mr. Mahomedbhai Hajibhai, Rai Bahadur Sir Sarupchand Hookamchand, Kt., Ramnarayan Harnandrai, J.P., Khetsi Khiasi, J.P. (of Messrs. Hirji Khetsi), Rameshwardas Birla (of Rai Bahadur Shivnarayan Baldeodas), Govindlal Pitty (of Raja Bahadur Shivlal Motilal), Laxmandas Dagha (of Rai Bahadur Bansilal Abirchand), Kastoorbhai M. Nagarsheth, Fatehchandji Ruiya (of Messrs Harnandrai Baijnath), Rai Bahadur Jamnalal L. Bachhraj, Madanlal Choudhry (of Messrs. Sooharmal Madanlal).

For many years the **Calcutta** Share Market had its meeting place in various gullies in the business quarter and was under no control except that of established market custom. In 1908 the **Calcutta Stock Exchange Association** was formed, a building was leased in New China Bazar Street now called Royal Exchange Place, a representative committee was formed, and the existing trade customs were focussed into rules drawn up for the conduct of business. Admittance as a member of the Stock Exchange is by vote of the committee, and the entrance fee is at present Rs. 500. The market custom differs very materially from that of most other Stock Exchanges since there are no settlement days, delivery is due the second day after the contract is passed and sales of securities are effected for the most part under blank transfers. Another difference in procedure as compared with the London Stock Exchange is that there are no "Jobbers" in the Calcutta market. The Dealers who take their place, more or less, are not compelled to quote a buyer's and a seller's rate and are themselves Brokers as well as dealers, calling upon the Banks and other clients and competing with Brokers.

There are about 150 members, besides outside brokers, the former consisting of European, Jewish, Marwari, and Bengalee firms. The Marwaris predominate. The volume of *bona fide* Investment business is comparatively small and insufficient for the number of Brokers. The principal business transacted on the Calcutta Stock Exchange is connected with the shares in Jute Mills. Coal Companies, Tea Companies registered in India, Miscellaneous industrial concerns (such as Paper, Flour, Sugar). Railway and Transit Companies and Debentures, the latter comprising those of Industrial concerns and Trustees' Investment Securities, namely, Municipal and Port Trust Debentures. When speculative operations are being actively engaged in, which frequently take the form of forward contracts for delivery in three months' time, the value of securities changing hands may aggregate as much as a crore of Rupees per month, but since the trade is not constant and one year differs very much from another, it would be difficult to estimate what the average annual turn over would amount to. The association has an honorary secretary and is not at present affiliated to the Bengal Chamber of Commerce.

Indians Abroad.

The Indian is naturally averse from emigration beyond the seas. Nevertheless there are some hundreds of thousands of Indians resident in other lands as labourers, shopkeepers or professional men. Their total number relatively to the population of the Indian Empire is very small being something under two million. In itself, however, it is considerable; and it acquires an extrinsic importance from the social and political issues involved in the settlement of Indians, either as indentured labourers in Crown Colonies, or as free residents in self-governing countries.

The right to migrate.—From the Imperial standpoint the case of Indian migration to the self-governing Colonies is much the more important, and for a time the problems arising therefrom became acute. There were two centres of difficulty—South Africa and British Columbia. In each country the situation involved particular local problems of extreme difficulty. But before passing to a discussion of them it is necessary to refer to the larger question of the right of migration within the Empire. The intense feeling aroused in India by the disabilities suffered by Indians in the two countries named was primarily due to the belief that Indians were being denied the common rights of British citizenship. Without attempting to define the term "British citizenship," which is not so easily susceptible of definition as may be imagined, it must suffice to observe that unrestricted migration within the Empire does not appear to be the common right of His Majesty's subjects. The laws of the Dominion of Canada and the Commonwealth of Australia confer powers of exclusion of would-be immigrants hailing from any part of the Empire. These laws have been enforced against Englishmen on various grounds. The ground of exclusion is usually economic, and it is on that ground that the Colonial objection to unrestricted immigration from India operates. It is unfortunately inevitable that the problem assumes in the popular mind a racial complexion. But in actual experience it is the clash of economic interests and the possible political difficulties involved in the settlement of Indians in large numbers in the self-governing Colonies which the statesmen of the Empire have to take into account.

In South Africa the trouble gathered round the disabilities of Indians already settled there. The question of immigration restrictions, though important, held a less prominent place in the agitation. The most acute point of the controversy was the annual £ 3 head tax in Natal. Restrictions on the migration of Indians from one State of the Union to another was another sore point. The requirement to take out trading licenses was also felt to be a vexatious and invidious distinction between Indian and European traders. While the controversy was at its height, an Act was passed in the Union Parliament, restricting entry into South Africa to the wife or child of a lawful immigrant or resident who was the wife or child of a monogamous marriage. In a case brought before the courts it was decided that the only wife of a marriage solemnised according to the rites of a religion permitting polygamous marriages could not be admitted. The leaders of the agitation in South Africa adopted passive resistance tactics, which brought large bodies of Indian workmen in Natal into conflict with the police. The situation became acute, and a strong demand arose in India for the appointment of a Government Commission to enquire into the whole question. The Union Government appointed a Commission, and invited the Government of India to send a representative. Sir Benjamin Robertson, Chief Commissioner of the Central Provinces, was selected. The Commission reported on the whole favourably to the Indians.

The Indians' Relief Act, 1914, gives effect to those five of the 14 recommendations made by the Commission which necessitated legislation. First by the deletion of certain words from the Immigrants' Regulation Act, 1913, an Indian, married in accordance with the rites of a religion by the tenets whereof polygamy is recognised, is enabled to introduce into the Union one wife as well as her minor children by him, provided the Indian has in the Union no other wife. Another recommendation of the commission to which effect is given is as follows: An Indian man and an Indian woman may, on a joint application to a magistrate or marriage officer, and on complying with certain prescribed formalities, obtain registration of such a union between them as is *de facto* a monogamous union, and such registration will constitute a valid and binding marriage between them with all the incidents thereof, and will be recognised in the Union as such, notwithstanding that, by the tenets of the religion which they profess, polygamous marriages are recognised.

The third recommendation of the Commission to which effect is given is a provision for the appointment of Indian priests as marriage officers under the marriage laws of the several provinces of the Union. So far as Cape Colony is concerned this had been possible, as regards the Mohammedan religion, under Act No. 1 of 1860, while Law No. 19 of 1891 of Natal contained a similar provision. Under the new Act any Indian priest may be appointed a marriage officer for the purpose of the marriage laws of any province of the Union, and a marriage solemnised by him will, if solemnised in accordance with the rites and formularies of his religion and without any prescribed statutory words signifying the binding nature of the ceremony, be recognised as valid.

Another provision provides for the repeal of that section of the Natal Indian Immigration Laws which imposed an annual licence of £3 on Indians who, introduced as indentured labourers, failed to reindenture at the termination of their contracts.

In British Columbia, the trouble over Indian immigration came to a head in the early part of 1914, when a ship-load of Indians was despatched direct from the Far East to Vancouver. It was held up in the harbour there for several weeks. The passengers were not allowed to land. An appeal to the Cana-

dian courts resulted in the rejection of their claim, and eventually they were shipped back to India. The arrival of the Komagata Maru in Calcutta on September 26, 1914, was the occasion of a most lamentable incident. Anticipating an attempt to organise a political demonstration, the authorities provided special trains to convey the returned immigrants to their homes in the Punjab, and had taken power, under Ordinance V of 1914, to require them to do so; some sixty men immediately proceeded to their homes, but the balance under the leader, Gurdit Singh, endeavoured to force their way to Calcutta. They were turned back by the Military, and whilst arrangements were being made for a second special train, opened fire on the Police and Officials. The Military dispersed the immigrants by fire, and the majority were afterwards arrested. Sergt. Eastwood, Calcutta Police, and Mr. Lomax, of the E. B. S. Railway, were killed; the Punjab Police had one killed and six injured; sixteen rioters were killed, as well as two onlookers. The Government of India appointed a commission under the Presidency of Sir William Vincent to investigate the matter and it took evidence in Calcutta and the Punjab.

There are some 4,000 Indians already settled in British Columbia, chiefly Sikhs. They work as agricultural labourers, in factories and lumber yards, and also on the railways. The desire amongst them to bring their wives and families out from India points to the fact that they are fairly prosperous and find the conditions of life in the Colony agreeable. The attitude of the Colonial authorities towards them is governed by the general objection to Asiatic immigration. It is felt that the unrestricted entry of Asiatics would threaten the existence of British Columbia as a "White man's country." The immigration of Japanese and Chinese is regulated by special treaties with their Governments. The number of Japanese is limited to a few hundreds annually. Chinese immigrants pay a head tax of 500 dollars on entry.

An exaggerated danger.—Making every allowance for the Colonial standpoint, those acquainted with the internal condition of India cannot but feel that the fears that the self-governing colonies may be deluged by Indian immigration are greatly exaggerated. The total number of Indians resident out of India is under two millions, and of these the majority are to be found in tropical countries. Ceylon alone has 900,000 of them. There is a quarter of a million in Mauritius, about another quarter of a million in British Guiana and the West Indies, and 230,000 in the Straits Settlements and Malay States. Of the self-governing Colonies South Africa has by far the largest share, her Indian population being a little under 160,000, Natal alone accounting for 133,000. But this is not the result of ordinary migration. The nucleus of the South African Indian community was formed artificially by Natal herself. Until 1911, when it was stopped by the Government of India, there was for many years a steady stream of indentured immigration into Natal to supply labour to the sugar and other industries of that colony. The natural increase of the Indian population in South Africa is now much larger than the increase by immigration. In the whole Australian Commonwealth there are not more than 7,000 Indians. The Dominion of Canada has 4,500 in all. The significance of these trifling totals must be viewed in the light of the conditions prevailing in India. Here, it is true, there is a vast population. Were these 300 millions subjected to the economic conditions of Europe, and were they imbued by the adventurous and ambitious spirit of Europeans, there would be good ground for alarm in the Colonies at the possibility of an overwhelming influx of Indians. But those are precisely the conditions that do not obtain in the Indian Empire. The demand for labour in India is always greatly in excess of the supply. The tea-planters of Assam are obliged to compete with the Crown Colonies in an elaborate system of cooly recruitment. Labour-shortage is a chronic difficulty with the cotton mills of Bombay. As industrial expansion proceeds and agricultural methods improve, as more land is brought under cultivation, there must be a diminishing likelihood of emigration from India on any large scale. Add to this the inherent reluctance of the Indian to go far from home, and it will be apparent that the danger of "white men's countries" being swamped by Indian immigrants is at the least remote. It is never likely to assume such proportions as would pass the wit of statesmen to control.

Indentured Emigration.—The institution of indentured labour in the tropical colonies of the Empire is one of long-standing. As far back as 1864 indentured emigration from India to the British West Indies was in progress under Government control. In the case of several of the tropical colonies there has been no interruption since then in the steady inflow of several thousands of Indian labourers annually. In Mauritius, the Straits Settlements, the Federated Malay States and Natal the system for various reasons has come to an end; but in all those countries there is now a large population of Indians, permanent or temporary, engaged as free labourers or in independent positions. The principal colonies in which indentured emigration still prevails are British Guiana, Trinidad and Fiji. Even here, however, there has been a progressive decline during recent years, owing in part to the increased difficulty of recruiting in India. This difficulty arises entirely from the growing demand for labour within the Indian Empire, consequent upon industrial expansion.

The indentured system has been the subject of much controversy. It is disliked in India and by some people in England, because it seems to present features analogous to slavery—in that for the term of his indenture the labourer is not a free agent; he is *ad scriptus glebae*, and bound to serve the employer to whom he is assigned on terms which are absolutely fixed. In the colonies themselves the system is unpopular on two grounds—(1) it tends to depress the current rate of wages, (2) only a minority of the time-expired coolies become permanent settlers, the majority claiming their return passage and taking money out of the colony in the form of savings. From the point of view of the labourer himself, the indentured system, if it has any true resem-

blance to slavery, is a kind of bondage that is easily supportable. He is supplied with a free dwelling under highly sanitary conditions, his wages are fixed on the basis of the rate prevailing in the open market; no deductions are to be made therefrom for rent, hospital accommodation, medical attendance or medicine, which the estate proprietors are bound to provide. Free schooling is available for his children; and if, at the end of his indenture, he elects to remain in the Colony he is given a free grant of Government land. These are the conditions prevailing in British Guiana; but, with the exception of the grant of land they are similar to those in other colonies where indentured immigration is in force. The permanent Indian population in British Guiana is 127,000; in Trinidad 113,000, in Fiji 40,000, in Mauritius 258,000 and 113,000 in Natal. Other colonies, such as Jamaica and Dutch Guiana (Surinam) have small communities, amounting in each to a few thousand only of time-expired Indian coolies. Ceylon, the Straits Settlements and the Federated Malay States continue to attract Indian labourers, chiefly from Southern India, although no indenture system now exists in those countries.

The method of recruiting indentured coolies was fully described in the 1916 edition of the Indian Year Book, pp. 467-8.

Indians in the Colonies.—Statement shewing approximately the number of British Indian subjects in the various colonies.—

Trinidad	117,100
British Guiana	129,389
Jamaica	20,000
Fiji	44,220
Surinam	26,919
Reunion	3,012
Mauritius	257,697
Federated Malay States ..	210,000
Straits Settlements ..	..Figures not available.
Cape Colony	6,606
Natal	133,031
Transvaal	10,048
Orange Free State	106
Southern Rhodesia ..	..Figures not available.
Australia	Do.
New Zealand	Do.
Canada	..2,500 or 4,500 (the number is uncertain).

Commission of Inquiry Appointed.—About the end of 1912, the Government of India appointed a Commission of two, Mr. J. McNeill and Mr. Chiman Lal, to report upon the conditions of life of the Indian immigrants in the Colonies. The Commissioners were also desired to submit recommendations as to any arrangements which may be considered desirable to promote their welfare. The main points to which they were to direct attention were: the housing of the labourers and the sanitary conditions in which they live; the adequacy of medical arrangements; whether tasks are moderate, hours of work suitable and wages adequate; whether the administration of justice is fairly conducted and whether labourers meet with any difficulties in prosecuting employers or defending themselves; whether the penalties imposed by the labour laws are in any case excessive or unsuitable; whether the labourers are subjected to undue restrictions, outside working hours, and whether they enjoy sufficient facilities for proceeding to the Protector of Immigrants or to the Magistrate to lodge complaints; the relations generally between employers and labourers; whether facilities are afforded to Indian labourers in social and religious matters; and whether repatriations are promptly made and whether immigrants experience any difficulty in obtaining repatriation. They were desired to report specially in respect of certain features of the system. These were connected with any excessive number of prosecutions of labourers by employers, the position of the Protector of Immigrants, the terms of agreement which the emigrant is required to sign; the position of free Indians, female indenture, and suicides and immorality on the estates.

Merits of the system.—The Commissioners were engaged in their investigation for about 11 months. They visited Trinidad, British Guiana, Jamaica and Fiji, and also the Dutch Colony of Surinam which is permitted to recruit labourers under contract of indenture in India. Their report is in two parts, Trinidad and British Guiana taking up the first, and the rest the second part. After a detailed exposition of the state of things in respect of the points mentioned above in each of the colonies visited by them, the Commissioners observe: "We are convinced that notwithstanding our possibly disproportionate presentation of the unsatisfactory features of the existing system, a careful study of the facts elicited during our inquiry will result in the conclusion that its advantages have far outweighed its disadvantages. The great majority of emigrants exchanged grinding poverty with practically no hope of betterment for a condition varying from simple but secure comfort to solid prosperity. Emigrants live under very much better conditions than their relatives in India, and have had opportunities of prospering which exceeded their own wildest hopes. They became citizens of the colonies to which they emigrated and both they and their descendants have attained to positions commanding general respect and consideration." As regards the moral condition of the immigrants, the Commissioners observe: "There is no doubt that the morality of an estate population compares very unfavourably with that of an Indian village, and that the trouble originates in the class of women who emigrate." The **rates of suicide** among the indentured labourers are high as compared with those among free Indians in the colonies, and much higher than those among the population in the provinces of India. In Trinidad the suicide rate for the total Indian population was 134 per million and for the indentured 400 per million. The suicide rates among Indians in the other colonies were: British

Guiana, unindentured, 52 per million, indentured 100 per million; Jamaica, 396 per million, suicides amongst the unindentured not being separately recorded; Dutch Guiana, unindentured, 49, indentured 91; Fiji, unindentured, 147 per million, indentured, 926 per million. According to a statement prepared by the Department of Commerce and Industry of the Government of India, the average suicide rates for India are, the Bombay Presidency 28·8 per million, the United Provinces whence most emigrants are drawn, 63 per million and Madras, the other chief source of supply to Fiji, 45 per million.

Indian Feeling.—For some years past, there has been a growing feeling amongst Indian leaders that the indentured system of labour was inconsistent with national self-respect, and should be stopped. This feeling originated in the belief that the treatment accorded to Indians in the self-governing colonies, especially in South Africa, was due to the Colonials coming to think poorly of Indians as a race because of the class represented by indentured labourers. In 1910, the Government of India accepted a resolution moved by the late Mr. Gokhale putting an end to the indentured system so far as Natal was concerned. In 1912, however, they opposed his resolution to abolish the system altogether. Opinion in India has been ripening fast against the system, and it is reinforced by the rapid industrial development of the country making largely increasing demands on the labour market, depleted to some extent by the ravages of plague during the last twenty years. The startling figures of suicide and the admissions as regards the prevalence of gross immorality among estate populations, have roused public feeling in the country, and this has been accentuated by well-authenticated stories of young caste women of respectability having been decoyed by dishonest recruiting agents to the emigration depots. Mr. C. F. Andrews, late of St. Stephens' College, Delhi, and now connected with the school conducted on his own original lines by Sir Rabindranath Tagore—the poet-laureate of Asia, as the Viceroy aptly called him—at Bolpur in the Bengal Presidency, was deputed by the Indian Citizenship Association of Bombay to visit Fiji, and to investigate the conditions which make for the frightful rate of suicide recorded in that colony. He was accompanied by Mr. W. Pearson, who is also associated with the Bolpur School. Messrs. Andrews and Pearson, it may be mentioned, visited South Africa when the Passive Resistance struggle led by Mr. Gandhi was at its height, and rendered valuable service in bringing about the settlement that was eventually arrived at.

Protected Emigration.—In a speech delivered in Council on September 5, 1916, H. E. the Viceroy stated that the Government of India were contemplating the control of the operations of persons engaged in supplying labour to the Colonies. "Labourers," said His Excellency, "have a right to emigrate if they wish, and it would be very unwise and very undesirable on our part to prevent them, and we are, therefore, trying to devise arrangements which will secure that recruitment in this country is conducted under decent conditions, that a proper sex ratio will be maintained and that on arrival in the country of their destination they will be properly treated and allowed to engage themselves on terms at least as free as those obtaining at present in the Malay Peninsula, where a labourer can leave his employer by giving a month's notice. I think it will be clear to all who have studied the question that the Government of India would be departing gravely from its duty if it allowed emigrant labour to leave this country without proper protection and safeguards. There are a certain number of labourers, I believe a very small number, who emigrate as genuine free labourers, that is to say unassisted by pecuniary help and uninvited by any interested agency. But, if we confine ourselves to the abolition of our existing indentured emigration, a position will arise in which the parties interested in procuring Indian labour will be free to induce labour to emigrate by pecuniary help under any conditions they like, so long as the labourer does not go under indenture. The abuses likely to arise out of such a state of things would be very serious. I need only refer to the state of affairs which existed before the amendment of the **Assam Labour and Emigration Act**, in connection with so-called free labour. The consequence of this system was, as Sir Charles Rivaz put it in his speech before the Legislative Council in 1901, that a horde of unlicensed and uncontrolled labour purveyors and recruiters sprang into existence, who under the guise of assisting free emigration made large illicit gains by inducing, under false pretences, ignorant men and women to allow themselves to be conveyed to Assam. These emigrants were, it is true, placed under labour contracts on arriving in that province, but the abuses complained of arose in connection with the recruitment and not with the contract. Similarly when the system of indentured emigration first arose in India the only caution required was that intending emigrants should appear before a magistrate and satisfy him as to their freedom of choice and their knowledge of the conditions they were accepting. It was shown, in a report submitted in 1840, that abuses undoubtedly did exist in connection with recruitment in India, abuses which the constantly increased safeguards provided by successive Acts of the legislature where designed to correct. Uncontrolled recruitment cannot, it is clear, be permitted under any circumstances. Lord Hardinge promised, and I associate myself with him, to deal with certain points. These points were the better supervision of colonial recruiting in India, the insertion of information regarding the penal conditions attaching to labour contracts in the indenture signed by intending emigrants and the undesirability of labourers in the colonies being compelled to do work repellent to their caste ideas and religious beliefs. Regarding the first matter we have already consulted local Governments very fully when asking their views as to the precautions which will be required after the **abolition of indentured emigration.** As to the second point you are no doubt aware that Fiji has now abolished imprisonment for labour offences and other colonies are arranging to follow suit. But there will still be certain provisions remaining which we think should be brought to the notice of intending emigrants and we have arranged to do this as soon as the various colonial legislatures concerned have passed the amendments to which I have alluded."

Indenturing Abolished.—In 1917 the situation underwent a radical change. Whilst no official pronouncement was made, the idea gained popular acceptance that the Secretary of State had proposed that the system of indenturing should be continued for a further period of five years, pending the working out of an alternative system of recruitment. This aroused strong protests throughout the country. Whilst a reasonable desire was manifest not to add to the difficulties of the Government and of the colonies in time of war, it was felt that the continuance of a system open to such grave objections for ten years—five years for recruitment and five years for the new indentures to expire—was too long. Public meetings were held throughout the country. Government solved the difficulty by prohibiting all emigration from India, as a war measure, on account of the shortage of labour; subsequently assurances were given that the system would never be revived. Thus indenturing ended by a side issue, but nevertheless one which was quite definite.

Assisted Emigration.—Subsequently a committee sat in London to consider what form of assisted emigration should take the place of the indentures. Its report was issued about the middle of the year and the chief recommendations are here summarised.

Under this scheme Indian will arrive in the colony entirely free from debt and of any liability for the cost of his introduction. He will be in no sense restricted to service under a particular employer, except that, for his own protection, a selected employer will be chosen for him for the first six months. This employer can be changed, with the approval of the protector of Immigrants, if substantial reason can be adduced. From the time of his arrival the immigrant will be given land to cultivate for his own benefit. Each male adult employed in an agricultural industry will be granted for his personal use and cultivation a garden plot of one-tenth of an acre after six months' service and a larger plot of one-third of an acre will be made available whenever practicable by way of reward. At the end of three years' employment under any of the employers on the register steps will be taken to ensure that land is available for settlement in the simplest and cheapest manner. In each colony there will be a department responsible for the provision of sufficient land to meet all *bona fide* applications and for rendering it suitable for agriculture by adequate clearing, irrigation and drainage. These holdings will be up to five acres in extent, they will be subject to a reasonable annual rent in the case of lease-holds, and the settlements will be for a period of thirty years. Under the proposed system the immigrant can be proceeded against only by way of a civil suit in the ordinary course of law and will not be liable to any criminal penalties. A minimum wage will be fixed, subject to periodical revision. During the first twelve months the children under eleven years will be entitled to free rations while children under five will be given a face milk ration during the whole time that their parents remain in the service of an employer on the register. The provision of married quarters separate from the "single" quarters will be made compulsory upon all employers of more than twenty adult Indian immigrants and will be insisted upon so far as possible in the case of all other employers on the register. This register will contain the names of only "approved employers" that is to say of persons desirous of employing assisted emigrants, who have applied to the Protector of Immigrants and who have been found on inquiry to be suitable. Repatriation will be assisted when it is desired. The emigrants will receive for himself and his dependents half the passage money after three years' service and a larger proportion up to the whole cost after seven years' service.

With regard to recruitment, Emigration Agents will be licensed and paid fixed salaries, with possibly additional money grants for meritorious work. Their work will be supervised by Inspectors of Emigration, who will be men of standing on a graded scale of pay. Over them will be an Emigration Commissioner, who will be a Colonial Civil Service official, and a Protector of Immigrants, appointed by each Local Government to supervise emigration in the province affected. In each colony will be a Protector of Immigrants. The Emigration Depots will be visited by non-official gentlemen of standing in the district as also will be the Central Depot. The emigration of whole families will be encouraged but persons below the age of eighteen will be assisted to emigrate only when accompanied by their parents or guardians. Women unaccompanied by their families will not be assisted and the rule requiring a certain proportion of women to men will be abolished.

The report was published at a time when the political energies of India were concentrated on the development of the Indian constitution and the pending visit of the Secretary of State to discuss these questions on the spot. It attracted little attention. So far as opinion was expressed, whilst recognising that the system was an immense advance on the system of indenture, it was thought undesirable for Government to take so large a part in the direction emigration to distant lands.

Indians in Great Britain.

More than sixty years have gone by since the Parsi community, in the persons of the late Dadabhai Naoroji and other members of the firm of Cama & Co., led the way in the sojourn of Indians in England for business purposes. This lead it has since maintained, though there are both Hindu and Mahommedan business men firmly established there. Nor are the professions unrepresented, for there are in London and elsewhere practising barristers, solicitors and medical men of Indian birth. Three Indians are on the Secretary of State's Council, and at least one successful in the Civil Service examination elected to work in England instead of returning to his native land. The early years of the present century saw the gathering of a new Indian element in permanent residence—that of retired officials (particularly of the I. M. S.) and business men, or people of independent means who from preference or in order to have their children educated in England, leave the land of their birth and seldom if ever visit it again. Further, the stream of Indian summer visitors (which has been temporarily suspended by the war) includes wealthy people who came regularly as the swallows in spring, and some of them spent as much time in England or on the Continent as in their motherland. In the first years of the war, before the transfer of the Indian Corps in France to Eastern theatres, thousands of our valiant Indian soldiers, wounded or invalided from Flanders, went to England to be nursed back to health in the well-equipped and admirably administered Indian hospitals, some in Hampshire but chiefly at Brighton where the fact is to be commemorated by a permanent Indian provided memorial.

The Students.

But under normal conditions it is the student community which constitutes the greatly preponderating element and creates an Indian problem. Its numbers multiplied ten or twelvefold in the quarter of a century before the war, the increase being especially rapid after 1904 or 1905. There was indeed an artificial inflation some five years later when many youths (some of them ill prepared) were hurried off to the Inns of Court in order to be entered before the standard of the examinations qualifying for admission was raised. This sudden expansion was duly worked off but there was development in other directions, and particularly that of the technical and engineering schools and classes. Allowing for the very considerable temporary check caused by the European War the aggregate number may be estimated at now about 800. This total does not include the growing number of youths of good family, some of them heirs of Native States, admitted into our public schools, such as Eton and Harrow; nor the younger children of resident Indians. Nor does it comprehend Burmese students of whom there are about 80. Nor does it take full account of female students in schools and colleges. Exact and complete records on these points are not obtainable. A large expansion of the student element may be expected with the return of peace condition.

Coming to numerical details on 30th June last, 152 were at the Middle Temple, 74 at Lincoln's Inn, 68 at Gray's Inn and 75 at the Inner Temple. Altogether, including technical and medical students, there must be 400 in London. Edinburgh comes next with 86, exclusive of some 14 Burmese and Bengalese. Cambridge with 90, Oxford with 42, Glasgow with about 30 and Manchester with 16 while there are smaller numbers at Birmingham, Leeds, Sheffield, Liverpool, Dublin, etc. The sudden creation of an Indian Student centre in Dublin 2 or 3 years ago was due to the standard of admission to the King's Inns being much lower than that of the Inns of Court in London. The dublin standard has now been brought up to that of London and students are no longer going to Ireland for a call to the Bar.

The Advisers.

It is well known that until a few years ago the young Indians, apart from inadequately supported unofficial effort and the chance of coming under the influence of English friends of their families, were practically left to their own devices. But in April 1909 Lord Morley, as a result of the investigations of an India Office Committee, created for their benefit a Bureau of Information and appointed Mr. T. W. Arnold to the charge of it under the title of Educational Adviser. The Bureau was located in due time at 21, Cromwell Road, together with the National Indian Association and the Northbrook Society, which were thus given spacious quarters for their social work among the young men, without incurring what would otherwise have been the prohibitive cost of heavy rent. Lord Morley also established an Advisory Committee, mainly composed of influential Indian residents, but which has now ceased to exist, and in India corresponding provincial committees were formed to help and advise intending students. The work of the Bureau rapidly expanded, and in consequence Lord Crewe in 1912 re-organised the arrangements under the general charge of a Secretary for Indian students, Mr. (now Sir) C. E. Mallet who resigned at the close of 1916. He was succeeded by Mr. Arnold under the designation of Educational Adviser for Indian Students to the Secretary of State. Mr. N. C. Sen has followed Mr. Arnold as Local Adviser in London, and there are corresponding officers at the modern provincial universities.

Two strange delusions (in some cases they may be called deliberate misrepresentations) have been propagated in reference to these arrangements. One is that the India Office set up the Bureau in order to track down the wave of seditious sentiment which culminated in the assassination of Sir Curzon Wyllie ten years ago. As a matter of fact the Bureau was established three months before the commission of that crime, and was proposed at least a year previously. The object, as *The Times* observed in September 1908, was not "to put these young men into political leading strings, nor officially to restrict their liberty. It lies in doing all that is possible to facilitate

their educational progress and their general welfare, and in bringing them under wholesome and helpful influence." Mr. Arnold accepted his appointment on the distinct understanding that there would be no espionage

Removing Barriers.

It is no less of a delusion for the students to hold, as some of their elder fellow-countrymen have encouraged them to do, that the Bureau is responsible for restrictive rules and regulations of colleges and other institutions, or at any rate for their continuance in spite of protests. So far from blocking the way, as the Bureau has been singularly successful in opening closed doors and mitigating any real grievances. Its greatest triumph is that at Oxford and Cambridge, where naturally the difficulties of admission have been most pronounced, it has paved the way to the creation of University machinery to replace its own operations. The Oriental Delegacy at Oxford and the inter-collegiate Indian Students' Committee at Cambridge have now undertaken all the work hitherto carried on by the Local Advisers, and thus Indian undergraduates are given a welcome *locus standi*. Every element of Government control, so disliked by many of the students, has been eliminated by this practical recognition by the two ancient universities of a special responsibility towards Indians imbibing their culture and traditions. The Secretary of State for India makes grants to these bodies, which are about equivalent to the cost of his former local representatives. Familiarity with the conditions is assured by the appointment of the late Local Advisers as the respective secretaries.

Sir T. Morison's Committee on State Technical Scholarships reported in 1913 that the difficulties encountered by young Indians in supplementing academic instruction by technical experience in factories and workshops are general in character, being also applicable to their English contemporaries, and that there is "on the whole very little evidence of a racial prejudice against Indians." Nor need any youth go to England under misapprehension as to the facilities for his education and their limitations. The excellent "Handbook of Information for Indian Students" issued by the National Indian Association and the Advisory Committee, now in its fifteenth edition (1914) supplies all relevant facts and advice; and on personal details, the Indian Advisory Committees can be consulted.

Persuasion not Coercion.

It is not the case, as some Anglo-Indians of the old type imagine, that the Bureau could easily exercise disciplinary control over all young Indians in London and elsewhere. The fact is that except in respect to holders of Government and some Native State Scholarships it has no disciplinary authority save when parents place their sons under the guardianship of Mr. N. C. Sen or a provincial Adviser, and even in these cases the control can only be exercised in connection with the administration of the regular allowances. The Bureau has had a most beneficial influence in saving scores of young men from falling into debt, intemperance or marital folly, but this has been exercised not coercively but by friendly personal contact and keeping before them the obligation and necessity from every point of view of adhering to the purposes of culture and equipment for which they have gone to England.

The students have hosts of non-official friends and helpers. Under the presidency of Lord Hawke and the chairmanship of Sir F. Robertson an Indian Gymkhana Club has been established with a fine sports centre at Acton, the Mill Hill Park Club's ground having been taken over. The cricket eleven of the Club did well in 1917 and 1918 in matches at Lords and the Oval.

Students and the War.

The removal of misunderstanding should be materially promoted by the changed and gratifying conditions brought about by India's response to the call of Empire in the Great War. A call in which young Indians in England shared by the formation of the Indian Field Ambulance Corps (which reached a total enrolled strength of 272) and in other ways. Good feeling has also been promoted by the remarkable records of a good proportion of Indian students at the universities when they were almost entirely depleted of Young British contemporaries doing national war service. The distinctions gained are evidence of the better type of Indian student that has recently gone to the United Kingdom and of the generosity with which the universities and colleges there allow Indians to share in the endowments they have at their disposal. While Indians have been at an advantage from the absence of English competitors, there is no reason to suppose that the standard of attainment required has been appreciably lowered for the benefit of Indians But with the restoration of normal condition competition will certainly be more severer. If only men of high intellectual level and character went to them there would be no talk of exclusion of Indians from any of the seats of learning. The British universities are in fact always ready to admit students of approved ability and attainment; what they cannot stand is the lazy, incompetent and untrained man.

The whole position is sympathetically dealt with in the four annual reports of Sir Charles Mallet from 1913 to 1916 on the work of the Indian Students' Department. (Cd. 7160 Cd. 7719, Cd. 8127, and Cd. 8418, priced at 2½ each, excepting Cd. 8127, which is 2d.)

Appointments to the Indian Services.

Full details of the regulations governing appointments to the Indian Services are published in the India Office List. The more essential particulars, except as regards the Civil Service and Police,—of which fuller details are given elsewhere in this book—are given below.

Indian Agricultural Service.

The appointments in the Indian Agricultural Service include those of Deputy Director of Agriculture, Agricultural Chemist, Economic Botanist, Mycologist, Entomologist, Professors of Agriculture, Chemistry and Botany at Agricultural Colleges, and the like. Some of these are included in the Imperial Department of Agriculture under the direct control of the Government of India, but the majority are included in the Departments of Agriculture of the several provinces of India. In some cases candidates will be appointed direct to these posts, but in most cases they will be appointed as supernumeraries, will undergo a further course of training in India in Indian agriculture, and will be appointed to posts, for which in the opinion of the Government they are considered suitable, on the regular establishment as vacancies occur. Appointments are made by the Secretary of State for India as occasion may require. Candidates must, as a rule, be not less than 23, nor more than 30 years of age. In selecting candidates for appointment, weight will be given to the possession of (*a*) a University degree in honours in science or the diploma of a recognised school of agriculture or other like distinction; (*b*) qualifications in a special science according to the nature of the vacancy to be filled; (*c*) practical experience. Importance is also attached to bodily activity and ability to ride, and selected candidates have to undergo an examination by the Medical Board of the India Office as to their physical fitness for service in India.

The salary attached to posts in the Indian Agricultural Service will ordinarily be:—

	Rs.
For the first year	.. 400 per mensem.
„ second year	.. 430 „
„ third year	.. 460 „
„ fourth and subsequent years	.. 500 rising by annual increments of Rs. 50 a month to Rs. 1,000 a month.

Candidates who are required to undergo a further course of training in India as explained above will be appointed on this scale of salary, commencing on a pay of Rs. 400. Where, for special reasons, a candidate is recruited for direct appointment to one of the regular posts under paragraph 1, his initial pay will be determined with reference to the special qualifications on the length of European experience required for the appointment for which he is specially selected, but his subsequent increments of salary will be regulated by the foregoing scale. In addition to this scale of pay, officers filling appointments directly under the Government of India, as distinguished from appointments under Local Governments (but not including officers holding supernumerary posts, the post of Inspector-General, or the post of Director of the Pusa Institute) will be eligible for local allowances conditional on approved good work, and the Government reserves to itself the fullest discretion as to granting, withholding, or withdrawing them.

Indian Civil Veterinary Department.

The officers of the Indian Civil Veterinary Department perform or supervise all official veterinary work in India, other than that of the Army, and are debarred from private professional practice in India. Their duties may be divided into three classes, under the following heads:—

(*a*) Educational work in veterinary colleges;
(*b*) Horse and mule breeding;
(*c*) Cattle disease and cattle breeding.

Appointments to this Department are made, as vacancies occur, by the Secretary of State for India. Candidates must not (except on special grounds to be approved by the Secretary of State) be over 26 years of age, and must possess a diploma from the Royal College of Veterinary Surgeons. Evidence of a knowledge of bacteriology, and of capacity for carrying out original research, will be specially taken into account in estimating the claims of candidates. Good health, a sound constitution, and active habits are essential, and candidates must be certified by the Medical Board of the India Office to be physically fit for service in India.

Pay will be as follows:—On arrival in India Rs. 500 a month, rising by Rs. 40 each year to Rs. 1,100, which rate will continue from the beginning of the 16th to the end of the 20th year of service; after the beginning of the 21st year Rs. 1,200 a month.

Ecclesiastical Establishments (Church of England).

Appointments of Chaplains on Probation are made from time to time by the Secretary of State for India, as vacancies occur. Candidates for these appointments must be Priests who are between the ages of twenty-seven and thirty-four years, and have been for three years altogether in Holy Orders. Applications for nominations should be submitted to the Secretary of State.

A Chaplain will be on probation for three years (*a*); if confirmed in his appointment at the end of that period, he will be admitted as a Junior Chaplain.

The salaries of Chaplains are:—

Senior Chaplains, Rs. 10,200 per annum for five years, and then Rs. 12,000 per annum.

Junior Chaplains, Rs. 6,360 per annum for five years, and thereafter Rs. 8,160 per annum until promoted to be Senior Chaplains.

Chaplains on Probation, Rs. 5,760 per annum.

A Junior Chaplain becomes a Senior Chaplain after ten years' service, excluding the period of probation.

The retiring pay of Chaplains is regulated by the following scale:—

	Per annum. £ s. d.
After 23 years' service, with an actual residence in India of 20 years, including the period of probation	365 0 0
On Medical Certificate.	£ s. d.
After 18 years' actual residence in India, including the period of probation	292 0 0
After 13 years' ditto	173 7 6
After 10 years' ditto	127 15 0

Ecclesiastical Establishments (Church of Scotland).

The appointments of Chaplains of the Church of Scotland on probation are made from time to time by the Secretary of State for India, according as vacancies occur. Candidates for these appointments must have been licensed for three years and be under thirty-four years of age. Applications for nominations should be submitted to the General Assembly's Committee on Indian Churches along with testimonials based on a personal knowledge of the candidate's qualifications. Chaplains will be on probation for three years (*a*); if confirmed in their appointment at the end of that period, they will be admitted as Junior Chaplains.

The salaries of Chaplains are:—

Senior Chaplains, Rs. 10,200 per annum, and then Rs. 12,000 per annum.

Junior Chaplains, Rs. 6,360 per annum for five years, and thereafter Rs. 8,160 until promoted to be Senior Chaplains.

Chaplains on probation, Rs. 5,760 per annum.

A Junior Chaplain becomes a Senior Chaplain after 10 years' service, excluding the period of probation.

The retiring pay of Chaplains is regulated by the following scale:—

	Per annum £ s. d.
After 23 years' service, with an actual residence in India of 20 years, including the period of probation	365 0 0
On Medical Certificate.	
After 18 years' actual residence in India, including the period of probation	292 0 0
After 13 years' ditto	173 7 6
After 10 years' ditto	127 15 0

Educational Appointments.

The Indian Educational Service comprises those posts in the Educational Department to which appointments are made in England by the Secretary of State, and is thus distinguished from the Provincial Educational Services, which are recruited exclusively in India. It consists of two branches, the teaching, including Principalships and Professorships in the various Government Colleges and Head Masterships in certain High Schools; and the inspecting, including Inspectorships of Schools; but officers may be transferred at the discretion of Government from one branch to the other, and the conditions of pay and service are the same for both. It also includes certain special appointments, such as those of Superintendents of Schools of Art, for which special qualifications are required and special terms of engagement are prescribed. Officers of the teaching branch may be required to undertake duties in connection with the supervision of students in hostels or boarding houses, and with the direction of their studies and recreations. Appointments are made by the Secretary of State as occasion may require. Only laymen are eligible, candidates must as a rule be not less than 23, nor more than 30 years of age, but exceptions are sometimes made as regards the maximum limit only. Candidates must be British subjects, and must furnish evidence of having received a liberal education.

In selecting candidates for appointment, weight will be given to the possession of (*a*) a University degree in Honours, or equivalent distinction; (*b*) experience as a teacher; (*c*) qualifications in special subjects, depending on the nature of the vacancy to be filled. In selecting candidates for inspecting appointments, weight is given to linguistic talent, capacity for organisation and knowledge, practical or theoretical, of educational methods.

The salaries paid are as follows:—A newly appointed Inspector or Professor receives Rs. 500 a month, rising by annual increments of Rs. 50 a month to Rs. 1,000 a month. When this point has been reached, the increase of his emoluments depends upon his promotion, and takes the form of allowances ranging from Rs. 200 to Rs. 500, in addition to the salary of Rs. 1,000. There are at present 30 such allowances. There is in every Province a Director of Public Instruction. The posts of Director of Public Instruction are reserved for the Indian Educational Service so long as members of that Service can be found well qualified to fill them. Their pay differs in different Provinces:—

Three receive a salary of Rs. 2,000—100—2,500 a month.

Two receive a salary of Rs. 2,000 a month.

One receives a salary of Rs. 1,750—50—2,000 a month.

Two receive a salary of Rs. 1,500—100—2,000 a month.

One receives a salary of Rs. 1,250 rising to Rs. 1,500 a month.

Head Masters are appointed on an initial pay of Rs. 500, rising by annual increments of Rs. 50 a month to Rs. 1,000 a month, except in cases in which Local Governments may prefer to recruit on the scale of Rs. 500 a month, rising by annual increments of Rs. 50 a month to Rs. 750 a month. Head Masters are eligible for subsequent transfer to inspectorships or, if qualified, professorships. In all cases, increments of salary are given for approved service only.

For the appointments dealt with above men only are eligible. There are, however, some posts in the Indian Educational Service which are open to women and these comprise appointments as Inspectresses of Girls' Schools, Princi-

pals of Training Colleges, and occasionally Headmistresses of Schools. The salary attached to these appointments is ordinarily Rs. 400 a month, rising by annual increments of Rs.20 a month to Rs. 500 a month.

The Secretary of State is sometimes requested by the Government of India to supply persons to fill temporary vacancies in the Indian Educational Service, generally professorships in Colleges. Such appointments are made for not less than a university year (about nine months), with a prospect, in the case of thoroughly approved service, of future selection to fill either a temporary or a permanent appointment. The salary is Rs. 500 a month, rising by annual increments of Rs. 50 a month.

Indian Forest Service.

The Secretary of State for India in Council makes appointments of Probationers for the Indian Forest Service, according to the numbers annually required.

Candidates must be not less than 19 but under the age of 22 years.

Candidates must have obtained a degree with Honours in some branch of Natural Science in a University of England, Wales or Ireland, or have passed the Final Bachelor of Science Examination in Pure Science in one of the Universities of Scotland. A degree in Applied Science will not be considered as fulfilling these conditions. Candidates will be required to produce evidence that they have a fair knowledge of either German or French.

The ordinary period of probation will be two years. During that time probationers will be required to pass through the Forestry course at one of the following Universities—Oxford, Cambridge or Edinburgh (subject to the arrangement of a suitable course)—becoming members of that University, if not so already; to obtain the Degree or Diploma in Forestry which it grants; and to satisfy such other tests of proficiency as may be deemed necessary.

During the vacations, the Probationers will, under the direction and supervision of the Director of Indian Forest Studies appointed by the Secretary of State for India in Council, receive practical instruction in such British and Continental forests as may be selected for the purpose.

The Secretary of State for India in Council will make payments to each Probationer at the rate of £120 annually, not exceeding a total of £240.

Probationers who obtain a Degree or Diploma in Forestry, and also satisfy such other tests of proficiency as may be prescribed, will be appointed Assistant Conservators in the Indian Forest Department, provided they are of sound constitution and free from physical defects which would render them unsuitable for employment in the Indian Forest Service.

The sanctioned scale of the service at present is:—

	Rs.	
1 Inspector-General of Forests	2,650 a month.	
1 Assistant Inspector-General of Forests		
2 Chief Conservators (Burma and Central Provinces) ..	2,150	
22 Conservators, in three grades (including President, Forest Research Institute and College) ..	1,900 1,700 1,500	Respectively.
187 Deputy and Assistant Conservators		

An Assistant Conservator of Forests will draw pay at the rate of Rs. 380 a month from the date of his reporting his arrival in India rising by annual increments of Rs. 40 a month to Rs. 700 a month, thereafter by annual increments of Rs. 50 a month to Rs. 1,250 a month in the 20th year of service.

After a service of not less than 20 years, a retiring pension is granted not exceeding the following amounts:—

Scale of Pension.		Maximum Limit of Pension.
Years of Completed Service.	Sixtieths of Average Emoluments.	
20 to 24		Rs. 4,000 a year.
25 and above	30	Rs. 5,000 a year.

Indian Geological Survey.

The Geological Survey Department is at present constituted as follows:—

	Monthly Salary Rs.			
1 Director	2,000			
3 Superintendents	1,000 rising by		80 to	1,400
15 Assistant Superintendents:—				
For the first five years	350	,,	30 ,,	500
Thereafter	500	,,	50 ,,	1,000
1 Chemist	500	,,	50 ,,	1,000

Appointments to the Department are made by the Secretary of State for India. They will usually be made about July of each year, and the probable number of appointments will, if possible, be announced about two years in advance. The age of candidates should not exceed 25. Besides a good general education, a sound education in geology is essential: a University degree and a knowledge of French or German will be regarded as important qualifications; and certificates of a high moral character will be required. Candidates must also have had one or two years' practical training in mines, or in technical laboratories, as may be required by the Government of India. First appointments are probationary for two years.

India Office.

Vacancies in the clerical establishment of the Secretary of State for India are filled from among the successful candidates at the General Examinations (Class I, and Second Division), which are held from time to time by the Civil Service Commissioners for appointments in the Home Civil Service. The Examination for Class I. Clerkships is the same as the open Competitive Examination for the Civil Service of India. Further particulars may be obtained upon application to the Secretary, Civil Service Commission, Burlington Gardens, London, W.

Indian Public Works Department.

The Secretary of State for India in Council makes appointments of Assistant Engineers in the Public Works Department of the Government of India.

Candidates must have attained the age of 21, and not attained the age of 24 years.

Candidates must produce evidence that they have (1) obtained one of the University degrees mentioned in Appendix I., or (2) passed the A.M.I.C.E. examination, or (3) obtained such diploma or other distinction in Engineering as may, in the opinion of the Selection Committee, be accepted as approximately equivalent to the degrees mentioned.

The Engineer Establishment of the Indian Public Works Department consists of a staff of engineers, military and civil, engaged on the construction and maintenance of the various public works undertaken by the State in India.

2. The permanent establishment of the Department is recruited from the following sources :—

(1) Officers of Royal Engineers.

(2) Persons appointed to the Imperial Service by the Secretary of State by selection from the United Kingdom.

(3) Persons educated at the Government Civil Engineering Colleges in India and appointed to the Provincial Services by the Government of India.

(4) Occasional admission of other qualified persons.

3. The various ranks of the department are as follows :—

	Salary per annum (Imperial Service) Rs.
Chief Engineer, First Class	33,000
,, ,, Second Class	30,000
Superintending Engineer, First Class .	24,000
,, ,, Second Class ..	21,000
,, ,, Third Class ..	18,000
Executive Engineer, 20th year of service and following years	15,000
Executive Engineer, 19th year of service...	14,400
,, ,, 18th ,, ,, ..	13,800
,, ,, 17th ,, ,, ..	13,200
,, ,, 16th ,, ,, ..	12,600
,, ,, 15th ,, ,, ..	12,000
,, ,, 14th ,, ,, ..	11,400
,, ,, 13th ,, ,, ..	10,800
,, ,, 12th ,, ,, ..	10,200
,, ,, 11th ,, ,, ..	9,600
Assistant Engineer, 10th ,, ,, ..	9,000
,, ,, 9th ,, ,, ..	8,400
,, ,, 8th ,, ,, ..	7,920
,, ,, 7th ,, ,, ..	7,440
,, ,, 6th ,, ,, ..	6,960
,, ,, 5th ,, ,, ..	6,480
,, ,, 4th ,, ,, ..	6,000
,, ,, 3rd ,, ,, ..	5,520
,, ,, 2nd ,, ,, ..	5,040
,, ,, 1st ,, ,, ..	4,560

The increments will be given for approved service only and in accordance with the rules of the Department.

Exchange compensation allowance will not be granted to future entrants.

Promotions above the grade of Executive Engineer are dependent on the occurrence of vacancies in the sanctioned establishment, and are made wholly by selection; mere seniority is considered to confer no claim to promotion.

State Railways.

The Secretary of State for India in Council will, from time to time as may be required, make appointments of Assistant Traffic Superintendent on Indian State Railways.

Candidates must possess one or other of the following qualifications, *viz.* :—

(*a*) Not less than two years' practical experience of work in the Traffic Department of a British or Colonial Railway together with evidence of a sound general education.

(*b*) A degree or diploma of any teaching University in the United Kingdom granted after not less than three years' study in that University, or a technical diploma or certificate recognized by the Secretary of State.

The establishment of the Superior Traffic Department of Indian State Railways consists of a staff of officers, military and civil, engaged on the various railways administered by the State in India. This establishment is recruited from the following sources :—

(i) Officers of Royal Engineers;

(ii) Persons appointed by the Secretary of State by selection from the United Kingdom;

(iii) Persons appointed in India.

(iv) Occasional admission of other qualified persons.

The various ranks of the Department are as follows :—

	Salary per annum. Rs.
Traffic Managers	24,000
Deputy Traffic Managers	18,000
District Superintendents :—	
Class II., Grade 1	13,200
,, Grade 2	12,000
,, Grade 3	10,800
,, Grade 4	9,600
,, Grade 5	8,400
Assistant Superintendents :—	
Class III., Grade 1	6,600
,, Grade 2	5,400
,, Grade 3	4,800
,, Grade 4	3,600
,, Grade 5	2,400-3,000

The establishments of the Superior Locomotive and Carriage and Wagons Departments of Indian State Railways consist of officers engaged on the various railways administered by the State in India. These establishments are recruited from the following sources :—

(i) Persons appointed by the Secretary of State by selection from the United Kingdom ;

(ii) Persons appointed in India ;

(iii) Occasional admission of other qualified persons.

The various ranks of the Departments are as follows :—

	Salary per annum Rs.
Locomotive Superintendents	24,000
Deputy Locomotive Superintendent ..	18,000
Carriage and Wagon Superintendents	18,000 or 21,000
Deputy Carriage and Wagon Superintendents	15,000
Both Departments. District Superintendents :—	
Class II., Grade 1	13,200
,, Grade 2	12,000
,, Grade 3	10,800
,, Grade 4	9,600
,, Grade 5	8,400
Assistant Superintendents :—	
Class III., Grade 1	6,600
,, Grade 2	5,400
,, Grade 3	4,800
,, Grade 4	3,600
,, Grade 5 ..	2,400-3,000

Telegraph Department.

There are not at present any vacancies in the Superior Establishment of the Indian Telegraph Department, and it is considered unnecessary for the present to recruit any Assistant Superintendents from the United Kingdom. The arrangements for the future recruiting of the Department have not been finally settled. The various ranks of the superior establishment are as follows:—

	Maximum Salary per mensem Rs.
Director-General	3,000
Deputy Director-General	2,000
Directors	1,800
Deputy Directors	1,600
Chief Superintendents, 1st Class ..	1,400
Chief Superintendents, 2nd class ..	1,250
Superintendents, 1st Grade	1,000
,, 2nd Grade	850
Assistant Superintendents, 1st Grade..	700
,, ,, 2nd Grade.	550
,, ,, 3rd Grade .	450
,, ,, 4th Grade .	350

His Majesty's Indian Army.

A certain number of appointments to the Indian Army are offered to Cadets of the Royal Military College, and a certain number to candidates from the Universities. All King's Cadets (British and Indian) and Honorary King's Cadets nominated by the Secretary of State for India in Council have the option, during their last term at the Royal Military College, of electing for appointment to the Unattached List for the Indian Army, or for appointment to commissions in British Cavalry or Infantry. The appointments to the Unattached List for the Indian Army remaining after the claims of the King's Cadets and Honorary King's Cadets (Indian) have been satisfied are allotted in order of merit to Cadets who satisfy the requirements of the Regulations respecting admission to the Royal Military College, and who elect to compete for such appointments, at each final Examination at Sandhurst.

King's India Cadetships.

Twenty King's India Cadets are nominated each half-year from among the sons of persons who have served in India in the Military or Civil Service of His Majesty or of the East India Company. A Candidate is not eligible for nomination as a King's India Cadet if he be under 17 or over 19½.

A candidate is not eligible for nomination, and his claims will in no circumstances be considered until he (*a*) has qualified at the Army Entrance Examination; or (*b*) is prepared to attend the next examination. The fees of King's India Cadets at the Royal Military College are not payable by the State, except in cases where, after due inquiry, their pecuniary circumstances are ascertained to be such as to justify the payment.

Honorary King's India Cadetships.

Three Honorary King's India Cadets are nominated annually by the Secretary of State for India. Such Cadets are appointed from—

(*a*) The sons of officers of the Indian Army; who where killed in action; or who have died of wounds received in action within six

months of such wounds having been received, or from illness brought on by fatigue, privation, or exposure, incident to active operations in the field before an enemy, within six months after their having been first certified to be ill.

(*b*) The sons of officers of the Indian Army, who have obtained the brevet substantive rank of Major or Lieutenant-Colonel, and have performed long or distinguished service.

An Honorary King's Cadetship carries with it no pecuniary advantage.

Queen Alexandra's Military Nursing Service for India.

The Nursing establishment is for duty with British officers and soldiers, and at present consists of:—

4 Lady Superintendents.

16 Senior Nursing Sisters.

71 Nursing Sisters.

The numbers in these grades are subject to alteration.

Nursing Sisters at the time of appointment must be over 27 and under 32 years of age. Candidates for the Service must have had at least three years' preliminary training and service combined in the wards of a British general hospital or hospitals of not less than 100 beds in which adult male patients receive medical and surgical treatment, and in which a staff of Nursing Sisters is maintained.

The duration of a term of service, for all grades of lady nurses, is five years. A lady nurse who has been pronounced by a medical Board to be physically fit for further service in India, may be permitted to re-engage for a second and third term at the option of the Government, and again for a fourth term, or until the age of compulsory retirement, if in all respects efficient and if specially recommended by the Commander-in-Chief in India. But a lady nurse will not under any circumstances be permitted to remain in the service in the grade of Lady Superintendent beyond the age of 55 years, or in either of the other grades beyond the age of 50 years.

Rates of Pay.

(In addition to free quarters, fuel, light, and punkah-pullers.)

	Rs. per mensem.
Lady Superintendent ..	300 ,,
Senior Nursing Sister over five years in grade ..	225 ,,
Senior Nursing Sister under five years in grade ..	200 ,,
Nursing Sister over five years in grade	200 ,,
Nursing Sister under five years in grade	175 ,,

Royal Indian Marine.

All first appointments of executive officers in the Royal Indian Marine are made by the Secretary of State for India.

The limits of age for appointment to the junior executive rank, that of Sub-Lieutenant, are 17 and 22 years, and no candidate will be appointed who does not possess the full ordinary Board of Trade certificate of a Second Mate; certificates for foreign-going *steamships* will not be accepted.

PAY AND ALLOWANCES.

The present establishment of officers of the Royal Indian Marine and their allowances are as follows:—

		per mensem.
32	Commanders on pay ranging from Rs. 350 to Rs. 500, in addition to staff or command pay.	
72	Lieutenants on completing eight years' seniority .	On Rs. 300.
	Lieutenants on completing six years' seniority .	On Rs. 250.
	Lieutenants on completing three years' seniority ..	On Rs. 200.
	Lieutenants under three years' seniority ..	On Rs. 150.
	Sub-Lieutenants ..	On Rs. 125.
	Sub-Lieutenants ..	On Rs. 100.

Total .. 104.

In addition, 3 Commanders and 8 Lieutenants are at present employed in the Marine Survey of India.

A certain number of Shore, Port, and Marine Survey appointments are usually reserved for officers of the Royal Indian Marine. The numbers so reserved and the allowances attached (in addition to pay of grade), are as follows:—

	Allowances per mensem.
	Rs.
4 Shore appointments ..	400—1000
16 Port appointments	320— 870 per diem.
11 Marine Survey appointments	4—20

The sanctioned establishment of the Engineers branch of the Marine numbers 82, of whom at present, 10 are Chief Engineers, and the remainder Engineers and Assistant Engineers.

STERLING EQUIVALENTS.

N.B.—In calculating the sterling equivalents of rupee salaries drawn by Europeans appointed in England to permanent service in India, it is necessary to bear in mind that in some cases Exchange Compensation Allowance is drawn in addition to salary. This allowance is at present at the rate of 6½ per cent. on the salary, subject to a maximum of Rs. 138-14-3 a month; but the rate is subject to alteration in the event of any material variation in the average rate of exchange between England and India.

The following table shows the approximate equivalent in sterling of the rupee Salaries stated, (*a*) when Exchange Compensation Allowance is not granted, (*b*) when it is granted at the rate just mentioned :—

Rupees per Mensem.	Rupees per Annum.	(*a*) Equivalent without E. C. A.	(*b*) Equivalent with E. C. A.	Rupees per Mensem.	Rupees per Annum.	(*a*) Equivalent without E. C. A.	(*b*) Equivalent with E. C. A.	Rupees per Mensem.	Rupees per Annum.	(*a*) Equivalent without E. C. A.	(*b*) Equivalent with E. C. A.	Rupees per Mensem.	Rupees per Annum.	(*a*) Equivalent without E. C. A.	(*b*) Equivalent with E. C. A.
		£	£			£	£			£	£			£	£
100	1,200	80	85	650	7,800	520	552	1,600	19,200	1,280	1,360	2,900	34,800	2,320	2,431
125	1,500	100	106	700	8,400	560	595	1,700	20,400	1,360	1,445	3,000	36,000	2,400	2,511
150	1,800	120	127	750	9,000	600	637	1,800	21,600	1,440	1,530	3,100	37,200	2,480	2,591
175	2,100	140	149	800	9,600	640	680	1,900	22,800	1,520	1,615	3,200	38,400	2,560	2,671
200	2,400	160	170	850	10,200	680	722	2,000	24,000	1,600	1,700	3,300	39,600	2,640	2,751
250	3,000	200	212	900	10,800	720	765	2,100	25,200	1,680	1,785	3,400	40,800	2,720	2,831
300	3,600	240	255	950	11,400	760	807	2,200	26,400	1,760	1,870	3,500	42,000	2,800	2,911
350	4,200	280	297	1,000	12,000	800	850	2,300	27,600	1,840	1,951	3,600	43,200	2,880	2,991
400	4,800	320	340	1,100	13,200	880	935	2,400	28,800	1,920	2,031	3,700	44,400	2,960	3,071
450	5,400	360	382	1,200	14,400	960	1,020	2,500	30,000	2,000	2,111	3,800	45,600	3,040	3,151
500	6,000	400	425	1,300	15,600	1,040	1,105	2,600	31,200	2,080	2,191	3,900	46,800	3,120	3,231
550	6,600	440	467	1,400	16,800	1,120	1,190	2,700	32,400	2,160	2,271	4,000	48,000	3,200	3,311
600	7,200	480	510	1,500	18,000	1,200	1,275	2,800	33,600	2,240	2,351	5,000	60,000	4,000	4,111

The Indian Civil Service.

In the early years of the eighteenth century the East India Company was still little more than a body of traders. The genesis of the Indian Civil Service is to be sought in the modifications which the Company underwent as it found itself year by year more involved in the government of the country with which it was trading. It was gradually realised that neither the pay nor the training of the Writers, Factors and Merchants of the Company was adequate to the administrative work which they were called on to perform. As a result this work was often indifferently done, and corruption was rife. To Lord Cornwallis is due the credit of having reorganized the administrative branch of the Company's service, in accordance with **three main principles** from which there has been hitherto no deviation. These were that every civil servant should covenant neither to engage in trade nor to receive presents, that the Company on their side should provide salaries sufficiently handsome to remove the temptation to supplement them by illegitimate means, and that, in order that the best men might be attracted the principal administrative posts under the Council should be reserved for members of the Covenanted Civil Service as it was called. The first of these principles is embodied not only in the covenant which every member of the service still has to sign on appointment, but also in the "Government Servants' Conduct Rules," which are applicable to every civil department, however recruited. As regards the second, the scale of salaries originally prescribed was so handsome that it has not yet been considered expedient to undertake any general revision of it. The list of reserved posts remains, too much the same as in 1793, though certain modifications have been introduced to meet Indian aspirations.

At first nominations to the service were made by the Directors, but this right was withdrawn by Act of Parliament in 1853, and since 1855 **appointments** have been open to public competition, all natural-born subjects of the Crown being eligible. The age-limits and other conditions of examination have varied considerably from time to time, but at present candidates are examined between the ages of 22 and 24. At first young officers were sent straight to their appointments on recruitment, but in 1800 Lord Wellesley established a college at Fort William for their preliminary training. This was not a success and in 1805 a college at Haileybury was substituted, and for 53 years nominees underwent a two years' training there before proceeding to India. At present a year's course at a British University is prescribed, and at the close of this year there is a further examination. Failure to pass this means final loss of appointment, and seniority in the service is determined by combining the result of the open competition and this final compulsory examination.

The Statute of 1793 (33 Geo. cap. 52) modified in 1861, sets forth the list of **offices reserved** for members of the Indian Civil Service. It includes among others the offices of secretaries and under-secretaries to governments, commissioners of revenue, Civil and Sessions Judges, Magistrates and Collectors* of Districts (in the regulation provinces) and joint and assistant Magistrates and Collectors. In the non-regulation provinces, many of the above posts are held by military officers. In addition to these reserved posts there are many other appointments which the Indian Civilian can hold. He is now, however, debarred from permanent appointment as Governor-General or Governor, the highest office he can attain being those of Lieutenant-Governor and Member of the Viceroy's Council.

Despite the complete eligibility of **natives of India**, and despite the numbers of Indian who now seek their education in England, comparatively few have succeeded in obtaining appointments by open competition. On the 1st of April 1913 only 46 of the 1,319 civilians on the cadre were natives of India. In 1870 an important Act (33 Vict. cap. 33) was added to the statute-book which allowed the appointment of "natives of India of prove merit and ability" to any of the offices reserved by law to members of the Covenanted Civil Service, such officers were known as Statutory or Uncovenanted Civilians. This method of appointment was dropped in 1889, and facilities were afforded to Indians for promotion through the ranks of the Provincial Service.

The young civilian, on joining his appointment in India, is attached to a district as **assistant to the Collector.** He is given limited magisterial powers, and after passing examinations in the vernacular and in departmental matters he attains to full magisterial powers and holds charge of a revenue subdivision. During this period he is liable to be selected for the judicial branch and become an Assistant Judge. In course of time promotion occurs and he becomes either Collector and District Magistrate, or District and Sessions Judge: this promotion does not generally occur before he has served for at least ten years. The District Judge is the principal civil tribunal of the district and wields extensive appellate powers. In his capacity as Sessions Judge he tries the more important criminal cases of the district.

The **Collector** is not merely chief magistrate and revenue officer of his district. He also forms a court of appeal from subordinate magistrates, supervises municipalities and local boards, is chief excise officer and district registrar, and in general represents Government in the eyes of the people. The Collector and his assistants are expected to travel over their

* The Chief Revenue Officer of a District is known as the Collector in the "regulation provinces" of Bengal, Madras, Bombay, Agra and Behar and Orissa. Elsewhere he is the Deputy Commissioner, and his assistants are Assistant Commissioners.

charges; touring rules vary in different provinces, but in Bombay the Collector spends four and his assistants seven months in the year on tour.

By the time the highest grades in the offices of Collector or Judge are reached the Civilian has, as a rule, nearly completed the 25 years which are necessary before he can retire. Should he elect to continue in service, there are still posts to which he can look forward for promotion. On the one hand, he may become a Commissioner or even a Member of Council, and on the other, there are Judicial Commissionerships and seats on High Court Benches. Such is the normal career of a Civilian, but this, by no means, completes the account of his prospects, for nearly one-fourth of the service is, as a rule, employed in posts—some reserved and some not—out of the regular line. A number of Civilians are employed in the Imperial and Provincial Secretariats, some are in political employ in the Native States, others hold responsible positions in the Customs, Police, Salt, Post Office and other departments, or supervise big municipalities and public trusts.

The Civilian may retire after 25 years' service and in the ordinary way must retire on reaching the age of 55. He contributes throughout his service to a pension which is fixed, regardless of whether he has risen to be a Lieutenant-Governor, or has remained at the foot of the ladder. Every Civilian, moreover, married or single, subscribes to an annuity fund which provides for the widows and orphans of deceased members of the service.

Public Services Commission.

In July, 1912, it was announced that the King had been pleased to approve the appointment of a Royal Commission to examine and report upon the Public Services in India. The Royal Commission was constituted as follows:—

Chairman.—The Right Hon. Lord Islington, K.C.M.G.

The Earl of Ronaldshay, M.P.

Sir Murray Hammick, K.C.S.I., C.I.E., Indian Civil Service.

Sir Theodore Morison, K.C.I.E., Member of the Council of India.

Sir Valentine Chirol.

Frank George Sly, Esq., C.S.I., Indian Civil Service.

Mahadev Bhaskar Chaubal, Esq., C.S.I., Member of the Governor of Bombay's Executive Council.

Gopal Krishna Gokhale, Esq., C.I.E., Member of the Viceroy's Legislative Council.

Walter Culley Madge, Esq., C.I.E., Member of the Viceroy's Legislative Council.

Abdur Rahim, Esq., Judge of the Madras High Court.

James Ramsay MacDonald, Esq., M.P.

Herbert Albert Laurens Fisher, Esq., Fellow and Tutor of New College, Oxford.

The Terms of Reference were as follows:—

To examine and report upon the following matters in connexion with the Indian Civil Service, and other civil services, Imperial and Provincial:—

(1) The methods of recruitment and the systems of training and probation;

(2) The conditions of service, salary, leave, and pension.

(3) Such limitations as still exist in the employment of non-Europeans and the working of the existing system of division of services into Imperial and Provincial;

and generally to consider the requirements of the Public Service, and to recommend such changes as may seem expedient.

Work of the Commission.—The Royal Commission visited India in the cold weather of 1912-13, and toured extensively in India, including Burma, confining their attention mostly to hearing the evidence of and relating to the Indian Civil Service. They subsequently sat in London and in October, 1913, again left for India to enquire into 28 Services other than the Indian Civil and the Provincial Services. They assembled first at Delhi on November 3rd, and examined Imperial officers and witnesses from the United Provinces, the Punjab and the North-West Frontier Province. They then assembled at Calcutta in the middle of December, to hear witnesses from Bengal, Bihar and Orissa, and Burma.

Early in February the Royal Commission went to Madras, and completed the tour at Bombay, where witnesses from Western India and the Central Provinces were heard.

The Commission returned to England in the spring of 1914, and drew up a report of which publication was delayed on account of the war, until January, 1917. This report is a large blue book of 529 pages. The actual report of the Commissioners, with their recommendations, runs to 65 pages, but the annexures covering the various departments occupy 300 pages. Special minutes relating to the report by members who sign it take up 22 pages, while a long minute, which really constitutes a separate report, by Mr. Abdur Rahim, of the Madras High Court, who regrets he has been unable to agree in the tenor of report or accept the more important of the conclusions of the commissioners, runs to no fewer than 94 pages.

Conclusions.—The Commission at the end of their report thus sum up their conclusions:—

At the end of the various annexures to our report we have summarised in detail the recommendations which we have made with regard to each service. The proposals we have put forward for increased expenditure have been framed without regard to the prior claims of the present war on the resources of the country, and may need to be given effect to gradually. Otherwise we have taken into account the existing situation. The main conclusions to which we have come are as follows:—

(i) Where it is necessary to organise the public services into higher and lower branches,

this should be arranged on the basis of the work which they are required to do, and not, as is now in some instances the case, of the race of, or the salaries drawn by, their members, or any such artificial distinction (paragraphs 24 to 26).

(*ii*) Officers promoted from a lower into a higher service should ordinarily be given the same opportunities as officers who have been directly recruited and should be eligible on their merits for appointment to any post in their service. Both classes of officers should be shown on the same list and should take seniority amongst themselves from their date of entry on the list. Except in the case of the Indian civil service all promoted officers should also be made full members of the service into which they are promoted (paragraph 27).

(*iii*) The practice of employing military officers on civil duties should be continued in the medical, public works, railway, and survey of India departments, and subject to the conditions stated Military officers should also be eligible for appointment to the mint department. Elsewhere the practice of recruiting them should be allowed to die out, but this should take place gradually in the case of the civil service in Burma (paragraph 28).

(*iv*) The practice of employing members of the Indian civil service in other departments should be continued in the post office, and in the Northern India salt revenue, Indian finance and customs departments. Such officers should also continue to supervise the work of the land records (Burma), registration, salt and excise, and survey (Madras) departments. They should no longer be appointed directors of agriculture, but rural commissionerships should be created and be manned from their ranks. The Inspector-generalships of police should no more be recruited for in the Indian civil service, but Indian civil servants, should continue to be eligible for these appointments subject to the claims of qualified police officers (paragraph 29).

(*v*) The services which lie between the higher and the subordinate services should no longer be designated "provincial" services. If they are organised provincially they should ordinarily bear the name of their province; for example, the Madras civil service, the Bombay police service, and so on. If they are under the Government of India the terms class I and class II should be used for the two services. These terms should also be used in the education department (paragraph 30).

(*vi*) The services for which recruitment is now made normally in India should continue to be recruited for in that country. The Indian finance department should be added to this category. The military finance department should be similarly treated, if there are no military considerations to the contrary. Eventually, similar action should be taken with the customs department, but for the present some recruitment in Europe for this department should be permitted. The remaining services for which recruitment is now made wholly in Europe, or partly in Europe and partly in India, should be divided into three main groups. In the first should be placed the Indian civil service and the police department, in which it should be recognised that a preponderating proportion of the officers should be recruited in Europe. In the second should come services like the education, medical, public works and so on, in which there are grounds of policy for continuing to have in the personnel an admixture of both western and eastern elements. For these services arrangements should be made for recruitment in both countries. In the third should be placed certain scientific and technical services, such as the agricultural and civil veterinary departments, etc., for the normal requirements of which it should be the aim to recruit eventually in India. To this end educational institutions should be developed in India on a level with those now existing in Europe so as to produce the necessary supply of candidates (paragraphs 31 and 32).

(*vii*) No system of state scholarships will provide a suitable method for increasing the number of non-Europeans in the public services (paragraph 35).

(*viii*) In certain services arrangements should be made for the appointment of a minimum number of Indians, but this should not be made a general practice for fear that the minimum may come to be regarded as a maximum (paragraph 35).

(*ix*) To secure an increase in the number of non-Europeans employed, so far as this is not obtained automatically by the proposals made with regard to organization and the place of appointment, different methods should be followed in different services, as detailed in the annexures. Speaking generally, technical institutions in India should be created or expanded; provision should be made for advertising vacancies; Indian members should be appointed to serve on the committees which will advise on the selection of recruits; and, finally, the statistics relating to the employment of members of the various communities should be published every ten years (paragraph 36).

(*x*) The question of the extent to which the services should be manned by the direct recruitment of untried officers and by the promotion of experienced officers from an inferior service should be settled separately for each service, as explained in the various annexures. But in every case opportunities should be created for young men, and direct recruitment should be encouraged wherever possible (paragraph 37).

(*xi*) In the present conditions of India no general system of competitive examinations as a means of entry to the public services is suitable, but where such a method exists it should ordinarily be maintained (paragraph 42).

(*xii*) When nominating direct recruits for admission to the services the authorities in India should act with the advice of committees which should not be purely departmental in character, but should contain persons in touch with educational institutions, and should also have a non-official and an Indian element. Publicity should be given to all vacancies, and applicants should be forbidden to bring outside pressure to bear on individual members of the committees. A similar procedure should be followed in England. Candidates for services recruited in India should ordinarily possess minimum educational qualification. This need not be identical for all candidates, but the standard for all should be the same (paragraph 44).

(*xiii*) In recruiting specialists care should be taken to draw upon the widest possible field (paragraph 45).

(*xiv*) Arrangements can best be made for communal representation in India by the exercise of the powers of Government under the system of nomination proposed. No hard and fast rule or proportion is suitable (paragraph 46).

(*xv*) Except where otherwise provided, direct recruits should be on probation for two years. A probationary course in England should be given only to recruits for the Indian civil and forest services, and in the latter only for so long as recruits are taken from Europe. As the schools of forestry of the United Kingdom are developed, recruits from Europe should be taken from them (paragraph 47).

(*xvi*) The question of training requires to be considered for each service separately, as explained in the various annexures. Inter-provincial conferences of officers responsible for the training of recruits should be encouraged (paragraph 48).

(*xvii*) In fixing the salaries of their employes, Government should pay so much and so much only as is necessary to obtain recruits of the right stamp, and to maintain them in such a degree of comfort and dignity as will shield them from temptation and keep them efficient for the term of their service (paragraph 49).

(*xviii*) Except where otherwise expressly provided, officers should be remunerated by an incremental scale of salaries on the compartment system. Where this is done the rules with regard to acting allowances should be revised (paragraphs 50 and 51).

(*xix*) Exchange compensation allowance should no longer be paid, but generally speaking the amounts now drawn on this account should be added to the salaries of officers (paragraph 52).

(*xx*) The salaries to be paid to Europeans and statutory natives of India respectively should be settled for each service separately and ordinarily in accordance with the principle set out in item xvii above, and not on any general consideration of race or place of recruitment. In services in which different rates are found to be suitable they should be fixed on the merits of each case, and no proportion should be laid down generally as between the amounts payable to the two classes of officers. In services the normal requirements of which will eventually be met in India, the standard scale of salaries should be that considered suitable for statutory natives of India, and special rates should be fixed for Europeans for so long as they are recruited. In certain services in which equality of pay has long been an established practice this should be maintained. In other services officers should be brought to an equality in the administrative ranks, and earlier in the education department. As a special case statutory natives of India recruited in Europe should be paid as Europeans (paragraphs 53 to 57).

(*xxi*) The salaries to be paid to officers should be as stated in the various annexures. For recruits in India from the ordinary graduate class, or their equivalent amongst members of the domiciled community, a general scale rising from Rs. 250 to Rs. 500 a month should be introduced. Beyond this there should be selection scales of posts suitable to the circumstance of each service. For services requiring higher initial qualifications higher rates should be adopted (paragraph 58).

(*xxii*) The necessary steps should be taken to keep the cadres of the services up to a strength sufficient to cope with the work to be done (paragraph 61).

(*xxiii*) The calculations in accordance with which recruitment is made should be worked out with greater precision, and should be revised periodically with due regard to the requirements of leave and training. More precision is needed in fixing the annual rate of recruitment, and service tables should be prepared and kept up to date for each service or group of services. Distribution lists should be maintained for all services, which are recruited on a system, to show by groups of years the theoretical and actual number of officers present. Excesses or defects should be dealt with at the point where they occur. If in spite of these measures blocks in promotion are experienced, special allowances should be given on the merits of each case (paragraphs 61 to 65).

(*xxiv*) An expert committee should be appointed to simplify the present travelling allowance rules, to consider their sufficiency for everyday purposes, and to revise the classification of officers. Immediate measures should be taken to reimburse officers for all reasonable charges incurred by them on transfer from one station to another, whether personal to themselves or on behalf of their families and household establishments (paragraphs 66 to 68).

(*xxv*) The rules as to house allowance should be revised on the lines indicated (paragraph 69).

(*xxvi*) A Burma allowance should be given on the terms stated (paragraph 70).

(*xxvii*) Free passages should be given to officers of the services specified (paragraph 71).

(*xxviii*) Inefficient officer should be compulsorily retired (paragraph 72).

(*xxix*) Officers who are subject to the operation of article 459 of the civil service regulations should be retired at the age of 55, unless Government, in their sole discretion, decide to grant an extension of service (paragraph 73).

(*xxx*) There should be separate European service and Indian service leave rules to regulate the taking of long leave. Speaking generally, officers recruited under European conditions of salary should be subject to the European, and others to the Indian service leave rules (paragraphs 77 and 78).

(*xxxi*) The European service leave rules should be simplified, and greater facilities for leave on higher pay should be given by allowing privilege leave to be accumulated up to four months and furlough to be commuted subject to the restrictions stated (paragraphs 79 and 80).

(*xxxii*) The sterling amounts of the allowances payable under the European service

leave rules should stand to the rupee amounts in the proportion of 18 to 16 (paragraph 81).

(*xxxiii*) The Indian service leave rules should be simplified; officers subject to them should be allowed to accumulate privilege leave up to four months, and the allowances permissible should be increased to the extent stated (paragraphs 82 and 83).

(*xxxiv*) The rules relating to study leave should be revised; the arrangements for deputing officers to study particular problems should be made more elastic, and facilities should be given to officers on leave to study voluntarily such problems as interest them (paragraphs 84 to 86).

(*xxxv*) With the exceptions specified all officers should be under the same pension rules; all should serve normally for thirty years, but those recruited after the age of twenty-five in the services noted should be granted the concessions indicated, and all should be able to retire optionally on a reduced pension after twenty-five years' service. Government should be able to retire any officer after this period (paragraphs 87 to 91).

(*xxxvi*) The maximum limits of pension should be increased on the conditions stated and special additional pensions of amount stated should be drawn by the officers noted (paragraphs 92 and 93).

(*xxxvii*) A scheme for a general family pension fund, or for separate funds for different classes of officers, should be worked out on a self-supporting basis (paragraph 96).

Temporary Provisions.

In October, 1915, a Bill was introduced into the House of Lords, entitled "An Act to enable persons during the continuance of the War, and for a period of two years thereafter, to be appointed or admitted to the Indian Civil Service without examination." The following is the text of its provisions:—"(1) The Secretary of State in Council may with the advice and assistance of the Civil Service Commissioners make rules providing for the admission and appointment to the Indian Civil Service by the Secretary of State in Council, during the continuance of the present war and for a period not exceeding two years thereafter, of British subjects possessing such qualifications with respect to age and otherwise as may be prescribed by the rules, notwithstanding that they have not been certified as being entitled for appointment as the result of examination in accordance with the regulations and rules made under section thirty-two of the Government of India Act, 1858, and section ninety-seven of the Government of India Act, 1915: Provided that—(*a*) not less than one-fourth of the persons admitted to the Indian Civil Service during such period as aforesaid shall be persons who have been so certified as aforesaid; and (*b*) a person shall not be appointed to the Indian Civil Service under the rules made under this section unless the Civil Service Commissioners certify that by such means as may be prescribed by the rules they have satisfied themselves that in their opinion he possesses the necessary educational qualifications.

The provisions as to the laying before Parliament of regulations and rules made under the said sections thirty-two and ninety-seven shall apply to the rules made under this section.

This Act may be cited as the Indian Civil Service (Temporary Provisions) Act, 1915."

In the **debate on the second reading** of the Bill, Lord Islington explained that this was an emergency Bill introduced to meet the difficulties created by war conditions. Government asked Parliament to authorise the suspension of the statutory system of open competition on two grounds. They wished to prevent any deterioration in the class of officers to be recruited for the I.C.S. and they sought power to provide a method by which those who were fighting at the front should as far as possible be protected from losing their careers as Indian Civil Servants owing to their patriotic action. The Bill sought to secure those ends. Government was anxious that no injustice should be done to Indians and therefore contemplated that, if with the examination of one-fourth there was not as a result the same **proportion of Indians** successful as had been the case in former years, that number would be made up by selection hereafter. Provision for this was to be included in the rules formulated to give effect to the Bill. In the debate which followed Lord Macdonnell argued that the process of selection in the case of Indians could be far better carried out in India than in Whitehall. The work, he said, naturally fell within the functions of the Viceroy, who could command the best information as to the relative merits of candidates, and in India where the field of choice would be so much wider. Lord Islington argued in reply that the unsuccessful Indian candidates had a right to be considered. Lord Macdonnell further raised the question of the composition of the Selection Board and moved an amendment under which the board would consist of not more than nine members, including the First Civil Service Commissioner, a member of authority in public affairs, and representatives of the Universities and the public schools. On the suggestion of Lord Sydenham, he added that there should be at least one member with a knowledge of India. By an amended sub-section it has been provided that no person shall be appointed to the I.C.S. unless the Secretary of State, acting with the advice of the Civil Service Commissioners, is satisfied that he possesses the necessary educational qualification. The design is to check any arbitrary use of the powers of the Secretary of State, and to prevent favouritism toward the unfit.

THE INDIAN MEDICAL SERVICE.

The Medical Service under the control of the Government of India consists of some seven hundred and sixty-eight medical men recruited in England by competitive examination; and has as its primary duty the care of the native troops and of the British Officers and their families, attached to them. But in the course of rather more than a century and a half other duties and responsibilities have accrued to it, so that there are in addition the provision of medical aid to Civil Servants and their families, the administration of the civil hospitals of the large towns, and the supervision of the numerous small dispensaries provided either by the Government or private charity for the inhabitants of the larger villages. Moreover, the Service provides for the sanitary control of large areas, dealing with the sanitation of towns, protection of water supplies and the prevention of epidemic disease. It is also represented in the Native States by the Residency Surgeon, and in Persia by the Medical Officers to the British Consulates. The Jail Department is also administered in great part by Indian Medical Officers, generally in the dual capacity of Medical Officer and Superintendent; and up to quite recently the Officers in the Mints have been recruited from members of the medical profession. Lastly, the Service provides the men who are engaged in original research on diseases of tropical importance in the Bacteriological Laboratories which have arisen in India during the last fifteen years, and others who as Professors at the large medical schools have had the task of creating an indigenous medical profession which will make permanent throughout the Indian Empire the civilising influence of Western Medicine.

This remarkable combination of duties and responsibilities in a single Service has slowly evolved from the system, initiated in quite early days by the old East India Company, of providing "Chirurgeons" from England, by the nomination of the Board of Directors in London, for the care of the people and soldiers in the Indian "Factories," and on the ships trading with the East. Besides these the Company maintained several medical services, including those of St. Helena, the West Coast of Sumatra, Prince of Wales Island, and the China Coast. The Surgeons on the Company's Indiamen were frequently utilised for emergent work in India, as in the case of the Mahratta War of 1780 and other military operations of that time, for duty with troops, and sometimes to fill vacancies occurring among those who would now be called "civil surgeons."

Organisation.—The Indian Medical Service practically dates from the year 1764 when the scattered medical officers serving in India were united into one body: later, this was divided into the three medical "Establishments" of Bengal, Madras, and Bombay. In 1766, the Medical Service was divided into two branches, military and civil, the latter being regarded as primarily army medical officers, lent temporarily for civil duties, in which they formed a reserve for the Indian Army, and were consequently liable to recall at any time. This position was confirmed by the Council of Lord Cornwallis in 1788; and has been in existence ever since with great advantage to the military authorities in times of military stress. In 1898, the officers of the Service were given military rank, and since 1906 all the names have been borne on one list, though men on entering the service are allowed to elect a Presidency in which they will serve on entering the Civil Department.

The Service was thrown **open to Indians** by the India Act of 1853, the first competitive examination being held in January 1855, when the list was headed by a Bengalee student who subsequently attained distinction. It was calculated by Lt.-Col. Crawford, I.M.S., (the talented historian of the Service) that from January 1855 to the end of 1910, eighty-nine men of pure Indian extraction had entered the Service. The proportion now shows signs of yearly increase. The total number of Indians at present in the Service is a little more than five per cent. of the whole: while, of the successful candidates during the past five years, 17·6 per cent. have been men born and bred in the country.

Method of Entry.—Entrance into the Service is now determined on the results of competitive examinations held twice a year in London, the Regulations regarding which, and the rates of pay, rules for promotion and pension relating thereto, may be obtained on application to the Military Secretary at the India Office. Candidates must be natural-born subjects of His Majesty, of European or East Indian descent, of sound bodily health, and, in the opinion of the Secretary of State for India in Council, in all respects suitable to hold commissions in the Indian Medical Service. They may be married or unmarried. They must possess, under the Medical Acts in force at the time of their appointment, a qualification registrable in Great Britain and Ireland. No candidate will be permitted to compete more than three times. Candidates for the January examination in each year must be between 21 and 28 years of age on the 1st February in that year, and candidates for the July examination must be between 21 and 28 years of age on the 1st August.

The candidate will be examined by the Examining Board in the following subjects, and the highest number of marks obtainable will be distributed as follows:—

(1)	Medicine, including Therapeutics	1,200 Marks.
(2)	Surgery, including diseases of the eye	1,200 ,,
(3)	Applied Anatomy and Physiology	600 ,,
(4)	Pathology and Bacteriology	900 ,,

(5) Midwifery and Diseases of Women and Children .. 600 Marks.

(6) Materia Medica, Pharmacology and Toxicology.. 600 ;;

N.B.—The Examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.

Having gained a place at the entrance examination, the successful candidates will be commissioned as Lieutenants on probation, and will be granted about a month's leave. They will then be required to attend two successive courses of two months each at the Royal Army Medical College, and at Aldershot respectively.

Officers appointed to the Indian Medical Service will be placed on one list, their position on it being determined by the combined results of the preliminary and final examinations. They will be liable for military employment in any part of India, but with a view to future transfers to civil employment, they will stand posted to one of the following civil areas:—(1) Madras and Burma; (2) Bombay, with Aden; (3) Upper Provinces, *i.e.*, United Provinces, Punjab and Central Provinces; (4) Lower Provinces, *i.e.*, Bengal, Bihar and Orissa and Assam.

The allocation of officers to these areas of employment will be determined upon a consideration of all the circumstances, including as far as possible the candidate's own wishes.

The whole course lasts for four months, after which the duly gazetted Lieutenants proceed to India, and for the first years of their service are attached to native regiments in any part of the country. The doctor is an officer of the regiment, as was the case in the old days of the Army Medical Department. Of late years it has been proposed to form the members of the Service into a corps on the lines of the British Medical Service, by forming station hospitals for native troops, thereby releasing the doctor from regimental life. This reform appears to have fallen through for the present, but is likely to be brought into operation within a very few years. Several appointments in the Civil Department are now reserved for Indians recruited in the country.

Organisation.—The Head of the Service is the Director General, who is an official of the Government of India and its adviser on medical matters. He is also concerned with questions of promotion of officers to administrative rank, and of the selection of men for admission to the civil department. Attached to his office and under his general supervision is the Sanitary Commissioner with the Government of India, who is to have the control of the new Sanitary Service, a department which is undergoing enlargement and re-arrangement. In each Presidency or Province there is a local head of the civil medical service and medical adviser of the local administration, who is either a Surgeon General, or an Inspector of Civil Hospitals of the rank of Colonel. The medical service in each province consists of the Sanitary Branch and the purely professional. The former is composed of Sanitary Commissioners of Districts, who by keeping large tracts of country under observation are in a position to advise their respective governments of the existence of epidemics, and on the proper methods of dealing with them and of preventing their spread. It is, however, through the Civil Surgeon that the visitor to India will come in contact with the Service. This official is something more than a general practitioner; as he is expected to be the leading medical and surgical authority in a large district consisting of a million or more of souls. Owing to the varied experience obtained in India by the members of the Civil Medical Department, this official is generally a man of the highest professional attainments, especially so in the case of those senior men holding appointments in the larger towns. His duties are to give medical aid to the civil servants and treat families, and to administer the hospital which has been provided by Government in each headquarter town. In many cases too he will have the additional charge of the local jail, and be the Sanitary Adviser of the Municipality. Accustomed to meet the most serious emergencies of his profession, and to rely entirely on his own skill and judgment, the Civil Surgeon in India has given to the Indian Medical Service a reputation for professional efficiency which cannot be excelled by any other public medical service. Travellers in India falling sick within call of any of the larger towns can therefore rely on obtaining the highest professional skill in the shape of the ordinary Civil Surgeon of the I. M. S. There have lately been signs that the popularity of the medical service of India is waning in the medical schools of the United Kingdom, and consequently there is a suspicion that a class of man is now entering it of a somewhat lower type than that which has made the Service famous.

A Parliamentary Paper containing correspondence between the Government of India and the Secretary of State, on the promotion of an **independent medical profession** in India and the possibility of limiting or reducing the cadre of the Indian Medical Service, was published during 1914. Writing in 1910, the Government of India said that it was impracticable to make any reduction in the number of Indian Medical Service officers employed solely on civil duties, that is to say, those not belonging to the war reserve. An independent profession trained on western lines was growing up in India but had to overcome its universal rival in the shape of *hakims* and others trained in indigenous methods: Government could do much to encourage the growth of this profession by making provision for the registration of medical practitioners qualified according to western methods. The Secretary of State, replying in November 1912, said that he was unable to contemplate any substantial reduction in the Indian Medical Service. As for the independent profession, he trusted that the experience of the working of the Bombay Registration Act might justify the introduction of similar legislation for other Provinces. He considered that the Indian Medical Service should be restricted to the military needs of

the country both on account of economy and in order to increase as far as possible the number of important posts held by Indians; he was prepared to consider each new appointment on its merits, but any proposal for an increase in the civil posts included in the cadre of the Indian Medical Service would be subjected to the closest scrutiny. In reply to that despatch, the Government of India wrote in March, 1914:—"In view of the growing medical needs of the country which necessitate the employment of a larger staff of medical officers, some expansion of the Indian Medical Service is inevitable, and such expansion should not, in our opinion, be regarded from a different standpoint from the enlargement of any other cadre in response to the development of the work to be performed."

Pay and Allowance.—The following are the monthly rates of Indian pay drawn by officers of the Indian Medical Service when employed on the military side:—

Rank.	Unemployed Pay.	Grade Pay.	Staff Pay.	In Officiating Medical Charge of a Regiment.	In Permanent Medical Charge of a Regiment.
	Rs.	Rs.	Rs.	Rs.	Rs.
Lieutenant	420	350	150	425	500
Captain	475	400	150	475	550
,, after 5 years' service	475	450	150	525	600
,, after 7 years' service	..	500	150	575	650
,, after 10 years' service	..	550	150	625	700
Major	..	650	150	725	800
,, after 3 years' service as Major	..	750	150	825	900
Lieutenant-Colonel	..	900	350	1,075	1,250
,, ,, after 25 years' service ..	..	900	400	1,100	1,300
,, ,, specially selected for increased pay.	..	1,000	400	1,200	1,400

Pensions and Half-Pay.—Officers are allowed to retire on pension on completing 17 years' service, the amount they receive varying with the precise number of years they have served. The lowest rate for 17 years' service is £300 per annum, and the rate for 30 years £700 per annum. The increases in pension for each additional year's service over 17 are somewhat higher in the first 5 than in the first 8 of the 13 years between the shortest and longest periods of pensionable service. All officers of the rank of lieutenant-colonel and major are placed on the retired list on attaining the age of 55 years: the greatest age to which any officer can serve being 62.

Principal Civil Appointments.	Approximate Number of Appointments in each Class.	Salary per Mensem. When held by a Lieutenant-Colonel.	When held by a Major.	When held by Captain.	When held by Lieutenant.
		Rs.	Rs.	Rs.	Rs.
Inspectors-General of Civil Hospitals ..	6	2,250–2,500			
Sanitary Commissioner with Government of India.	1	2,000–2,500			
Inspectors-General of Prisons	8	1,500–2,000			
Principals of Medical Colleges	5	1,650–1,800	1,200–1,300		
Professorial Appointments	32	1,500–1,650	1,050–1,150	800–950	750
Sanitary Commissioners	8	1,250–1,800	for all ranks.		
Deputy Sanitary Commissioners ..	13	1,450–1,600	1,000–1,100	750–900	700
Bacteriological Appointments	11	1,500–1,600	1,050–1,150	700–900	650
Superintendents of Central Lunatic Asylums.	6	1,400–1,550	1,050–1,150	700–900	650
Superintendents of Central Gaols	31	1,300–1,550	850–1,050	600–850	550–650
Civil Surgeoncies (First Class)	37	1,300–1,450	850–950	600–750	550
Civil Surgeoncies (Second Class)	171	1,200–1,350	750–850	500–650	450
Probationary Chemical Examiner ..	1	....	....	600–750	550
Officers deputed to Plague Duty ..	20	1,450	1,000–1,100	750–900	700

Pilot Services.

Appointments to the Bengal Pilot Service are made by the Secretary of State for India and by the Government of Bengal; the latter appointments are limited to Anglo-Indians and Eurasians, and are made under separate regulations. In the case of appointments made by the Secretary of State, preference is given, *caeteris paribus*, to candidates who have passed through one of the training ships "Worcester" and "Conway."

Candidates for the Secretary of State's appointments must not be less than 18 and not more than 22 years of age. They must produce a Board of Trade or Colonial Certificate of Competency as a Second Mate, or any higher grade, for a foreign-going ship, and evidence of having served at sea not less than two years in a square-rigged sailing vessel of over 300 tons. The rates of pay and allowances of Leadsmen Apprentices while on duty are as follows, without exchange compensation allowance:—

When on the running list:—

	Rs.	
Junior Leadsmen ..	..107 a month	Plus 50 per cent. of the lead money collected from the ships on which they do duty.
Second Mate Leadsmen	..135 a month	
First Mate Leadsmen ..	..160 a month	

When employed as Chief and Second Officer:—

Chief Officers of pilot vessels, Rs. 160 a month.

As Second Officers of pilot vessels .. Rs. 135 a month.

Plus a mess allowance of Rs. 40 a month.

After five years' service a **Leadsman** Apprentice is allowed to appear at an examination to qualify him for appointment as **Mate Pilot**, but if he shows exceptional ability, and has passed each previous examination on his first attempt, bears a very good character, and is otherwise well reported on, this period may, with the special sanction of Government, be reduced to 4½ years. After three years' service as Mate Pilot, he is permitted to go up for an examination to qualify for appointment as **Master Pilot**, and, if successful, is promoted to that grade on the occurrence of a vacancy. Vacancies which occur in the grade of Branch Pilot are filled by promotion from the Master Pilots' grade, of men who have passed the Branch Pilots' examination. If the Local Government has reason to believe that a Pilot is, owing to physical unfitness of any kind, incapable of discharging his duties properly, it arranges for his medical examination and takes such action as may seem desirable when the results of that examination are communicated. In particular, Pilots are medically examined after the occurrence of any accident to the vessel in their pilotage charge, if the circumstances tend to show that the accident was in any way attributable to physical unfitness on the part of the Pilot.

Pilots are not entitled to any salary while on pilotage duty, but receive as their remuneration a share, at present 50 per cent., but liable to alteration at the discretion of the Government of Bengal, of the pilotage dues paid by ships piloted by them. The Government of Bengal reserves to itself the right to require all Pilots to obtain a Home Trade Master Mariner's Certificate before they are promoted to be Senior Master Pilots. Every member of the Pilot Service is subject to such rules as the Government of India or as the Government of Bengal under the control of the Government of India, may from time to time, respectively, make in regard to discipline, leave, leave allowances, number of officers in the service, distribution into grades, tonnage of ships to be allotted to the several grades, etc., and in all respects he is amenable to such orders as may be passed by the Government of Bengal, and is liable to degradation, suspension and dismissal by the Government of Bengal for any breach of such rules or orders, or for misconduct.

Other Pilot Services.—Bengal is the only province that has a covenanted pilot service: elsewhere pilotage is under the control of the local Port Trust. In **Bombay**, for example, the Port Trust have drawn up the following rules for entry into the service:

To be eligible for admission to the Bombay Pilot Service, candidates must be British Subjects, and at least 21 years of age but not more than 32. They must hold certificates of competency as Master and excellent testimonials as regards conduct, character and ability. They will be examined in the Port Office for form and colour vision as prescribed by the Board of Trade, and also an extra form vision test of each eye separately and must undergo an examination by, and produce a certificate from, the Medical Officer appointed by the Port Trustees that they are physically fit, and are of a sufficiently hardy or strong constitution to perform a Pilot's duty and that they, to all appearance, enjoy good health. Any Probationer may, with the sanction of the Port Officer, go before the Examining Committee, and if he passes he will be eligible for appointment as a 3rd Grade Pilot when a vacancy occurs. A Probationer, not passing the required examination to qualify for performing a Pilot's duties within six months after the date of his appointment, is liable to be struck off the list. Promotion to the various grades in the Pilot service is generally given by seniority, but the Port Trustees reserve to themselves the right of passing over any Pilot. There are 18 Pilots, six in each grade, who are paid according to the number of vessels piloted. The average pay of a 1st Grade Pilot is about Rs. 850, 2nd Grade about Rs. 750 and 3rd Grade about Rs. 650.

The Press.

The newspaper Press in India is an essentially English institution and was introduced soon after the task of organising the administration was seriously taken in hand by the English in Bengal. In 1773 was passed the Regulating Act creating the Governor-Generalship and the Supreme Court in Bengal and within seven years at the end of the same decade, the first newspaper was started in Calcutta by an Englishman in January 1780. Exactly a century and a third has elapsed since, not a very long period certainly, a period almost measured by the life of a single newspaper, *The Times*, which came into existence only five years later in 1785; but then the period of British supremacy is not much longer, having commenced at Plassey, only twenty-three years earlier. Bombay followed Calcutta closely, and Madras did not lag much behind. In 1789 the first Bombay newspaper appeared, *The Bombay Herald*, followed next year by *The Bombay Courier*, a paper now represented by *the Times of India* with which it was amalgamated in 1861. In Bombay the advent of the press may be said to have followed the British occupation of the island much later than was the case in Calcutta. In Calcutta the English were on sufferance before Plassey, but in Bombay they were absolute masters after 1665, and it is somewhat strange that no Englishman should have thought of starting a newspaper during all those hundred and twenty-five years before the actual advent of *The Herald*.

The first newspaper was called *The Bengal Gazette* which is better known from the name of its founder as *Hicky's Gazette* or *Journal*. Hicky like most pioneers had to suffer for his enterprising spirit, though the fault was entirely his own, as he made his paper a medium of publishing gross scandal, and he and his journal disappeared from public view in 1782. Several journals rapidly followed Hicky's, though they did not fortunately copy its bad example. *The Indian Gazette* had a career of over half a century, when in 1833 it was merged into the *Bengal Harkarn*, which came into existence only a little later, and both are now represented by *The Indian Daily News* with which they were amalgamated in 1866. No fewer than five papers followed in as many years, the *Bengal Gazette* of 1780, and one of these, *The Calcutta Gazette*, started in February 1784, under the avowed patronage of Government, flourishes still as the official gazette of the Bengal Government.

From its commencement the press was jealously watched by the authorities, who put serious restraints upon its independence and pursued a policy of discouragement and rigorous control. Government objected to news of apparently the most trivial character affecting its servants. From 1791 to 1799 several editors were deported to Europe without trial and on short notice, whilst several more were censured and had to apologise. At the commencement of the rule of Wellesley, Government promulgated stringent rules for the public press and instituted an official censor to whom everything was to be submitted before publication, the penalty for offending against these rules to be immediate deportation. These regulations continued in force till the time of the Marquis of Hastings who in 1818 abolished the censorship and substituted milder rules.

This change proved beneficial to the status of the press, for henceforward self-respecting and able men began slowly but steadily to join the ranks of journalism, which had till then been considered a low profession. Silk Buckingham, one of the ablest and best known of Anglo-Indian journalists of those days, availed himself of this comparative freedom to criticise the authorities, and under the short administration of Adam, a civilian who temporarily occupied Hasting's place, he was deported under rules specially passed. But Lord Amherst and still more Lord William Bentinck were persons of broad and liberal views, and under them the press was left practically free, though there existed certain regulations which were not enforced, though Lord Clare, who was Governor of Bombay from 1831 to 1835, once strongly but in vain urged the latter to enforce them. Metcalfe who succeeded for a brief period Bentinck, removed even these regulations, and brought about what is called the emancipation of the press in India in 1835, which was the beginning of a new era in the history of the Indian press. Among papers that came into being, was the *Bombay Times* which was started towards the close of 1838 by the leading merchants of Bombay, and which in 1861 changed its name to the *Times of India*. *The Bombay Gazette*, founded in 1791, ceased publication in 1914.

The liberal spirit in which Lord Hastings had begun to deal with the press led not only to the improvement in the tone and status of the Anglo-Indian press, but also to the rise of the Native or Indian Press. The first newspaper in any Indian language was the *Samachar Durpan* started by the famous Serampore Missionaries Ward, Carey and Marshman in 1818 in Bengali, and it received encouragement from Hastings who allowed it to circulate through the post office at one-fourth the usual rates. This was followed in 1822 by a purely native paper in Bombay called the *Bombay Samachar* which still exists, and thus was laid the foundation of the Native Indian Press which at the present day is by far the largest part of the press in India, numbering over 650 papers.

From 1835 to the Mutiny the press spread to other cities like Delhi, Agra, Gwalior, and even Lahore, whereas formerly it was chiefly confined to the Presidency towns. During the Mutiny its freedom had to be temporarily controlled by the Gagging Act which Canning passed in June 1857 on account of the license of a very few papers, and owing still more to the fears of its circulating intelligence which might be prejudicial to public interests. The Act was passed only for a year at the end of which the press was once more free.

On India passing to the Crown in 1858, an era of prosperity and progress opened for the whole country in which the press participated. There were 19 Anglo-Indian papers at the beginning of this period in 1858 and 25 Native papers and the circulation of all was very small. The number of the former did not show a great rise in the next generation, but the rise in

influence and also circulation was satisfactory Famous journalists like Robert Knight, James Maclean and Hurris Mookerji flourished in this generation. The *Civil and Military Gazette* was originally published in Simla as a weekly paper, the first issue being dated June 22nd, 1872. Prior to and in the days of the Mutiny the most famous paper in Northern India was the *Mofussilite*, originally published at Meerut, but afterwards at Agra and then at Ambala. After a lively existence for a few years in Simla the *Civil and Military Gazette* acquired and incorporated the *Mofussilite*, and in 1876 the office of the paper was transferred from Simla to Lahore, and the *Gazette* began to be published daily. During Lord Lytton's viceroyalty a reactionary policy was pursued towards the vernacular press which was restrained by a special Act passed in 1878. With the advent of Lord Ripon in 1880, the Press Act of Lytton was repealed in 1882. The influence of the native press especially grew to be very great, and its circulation too received a great fillip. This may be said to have gone on till 1897, when India entered upon a disastrous cycle of years during which plague and famine gave rise to grave political discontent which found exaggerated expression in the native press, both in the vernacular and in English. The deterioration in the tone of a section of the press became accentuated as years went on and prosecutions for sedition had little effect in checking the sinister influence.

In 1910 Lord Minto passed a Press Act applicable, not like Lytton's Act, to the peccant part alone, but like Canning's measure, to the entire press. This measure is having the desired effect inasmuch as it has undoubtedly checked seditious writing in all the provinces where it had previously been most rife. One marked effect of the Act has been to increase the influence and circulation of the moderate papers. There is some tendency, as in Eastern Bengal, to evade the Act by the secret production and dissemination of seditious leaflets.

Number of Printing Presses at Work, and Number of Newspapers, Periodicals, and Books Published.

Province.	Printing Presses.	Newspapers.	Periodicals.	Books.	
				In English or other European Languages.	In Indian Languages (Vernacular and Classical) or in more than one Language.
Bengal	758	157	206	385	2,177
Bihar and Orissa	136	22	34	92	819
United Provinces	547	107	212	249	1,788
Punjab	257	94	113	133	1,526
Delhi	52	11	14	17	188
North-West Frontier Province	20	(*a*) 2	1	....	....
Burma	157	49	60	23	223
Central Provinces and Berar	84	15	14	3	100
Assam	39	14	10	7	83
Ajmer-Merwara	12	2	6	1	62
Coorg	1	....	1	....	....
Madras	681	(*b*)242	1,747	494	1,927
Bombay	493	142	509	137	1,765
Total, 1915-16	3,237	857	2,927	1,541	10,658
Totals 1914–15	3,102	847	2,988	1,602	11,477
1913–14	3,020	827	2,848	1,477	10,712
1912–13	2,828	673	2,395	1,662	9,651
1911–12	2,780	656	2,268	1,596	9,988
1910–11	2,751	658	1,902	1,578	10,063
1909–10	2,736	726	829	2,112	9,934
1908–9	2,594	738	895	1,687	8,345
1907–8	2,571	753	1,062	1,524	7,095
1906–7	2,490	744	973	1,589	8,126
1905–6	2,380	747	793	1,411	7,644

(*a*) One ceased to appear in April 1915. (*b*) For calendar year.

Newspapers and News Agencies registered under the Press Rules and arranged alphabetically according to Station where they are published and situated.

NOTE.—*News Agencies are distinguished by an asterisk.*

Stations.	Title in full.	Day of going to Press.
Agra	Kayastha Hitkari	1st, 8th, 16th, and 24th of every month.
Ahmedabad ..	Ahmedabad Samachar	Daily.
	Coronation Advertiser	Wednesdays.
	Gujarati Punch	Sundays.
	Jaina Samachar	Sundays.
	Kathiawar and Mahikantha Gazette.	Saturdays.
	Political Bhomiyo	Thursdays.
	Praja Bandhu	Saturdays.
	Rajasthan	Fridays.
Ajmer	Rajastan Samachar	Thursdays.
Akola, Berar	Berar Samachar	Sundays.
Akyab	Arakan News	Tuesdays and Fridays.
Aligarh	Aligarh Institute Gazette ..	Wednesdays.
Allahabad	Abhyudaya	Fridays.
	Hindustan Review	On first of every month.
	Leader	Daily, except Tuesdays.
	Pioneer	Daily.
	Reuter's Telegram Company, Ld.	....
Allahabad Katra	Sarva Shikshak	....
Amraoti	Bharat	Wednesdays.
	Kartawya	Tuesdays.
	Pramod Sindhu	Mondays.
	Veer Shaio Sanjeevinee	Mondays.
Amreli	Islamic News	Mondays.
Amritsar	Khalsa Advocate	Weekly.
	Punjab Durban	Daily.
	Vakil	Bi-Weekly.
Anroha	Ittihad	Saturdays.
Angerhat	Jagaran	Sundays.
Angalore	Daily Post	Daily.
	Kasim-ul-Akhbar	Mondays and Thursdays.
Arrah (Patna) ..	Behar Bandhu	Fridays.
	Behar Herald	Saturdays.
	Express	Daily.
Barisal	Barisal Hitaishi	Sundays.
Baroda	Jagriti	Weekly.
	Shree Sayaji Vijaya	Thursdays.
Bassein, Burma	Bassein News	Tuesdays and Fridays.
Batticaloa (Ceylon) ..	Lamp	Every other Saturday.
Belgaum	Belgaum Samachar	Mondays.
Benares City ..	Awazal Khalk	Every Wednesday.
	Bharat Jiwan	Sundays.
	"Hindi Kesari"	Wednesdays.
	Indian Student	27th of each month.
	Kashi Temperance Samachar ..	Monthly.
	Mahamandal Magazine	Monthly.

Stations.	Title in full.	Date of going to Press.
Bhavnagar	Jainhasan	Tuesdays.
Bihar (Patna)	Ittehad	Wednesdays.
Bijapur	Karnatak Vaibhav	Saturdays.
Bombay	Advocate of India	Daily.
	Akhbar-i-Islam	Daily.
	Akhbar-i-Soudagar	Daily, except on Sundays.
	Andhra Patrika	Wednesdays.
	Argus	Sundays.
	Associated Press *	....
	Bombay Chronicle	Daily.
	Bombay Guardian	Fridays.
	Bombay Samachar ..	Daily.
	Briton	Daily, except Saturdays.
	Catholic Examiner	Thursdays.
	Gujarati	Saturdays.
	Illustrated Sporting Review ..	Saturdays.
	Indian Industries and Power ..	On the 15th of each month.
	Indian Investors' Referee ..	Fridays.
	Indian National News Agency ..	.....
	Indian Social Reformer	Saturdays.
	Indu Prakash	Daily, except Sundays.
	Jaina	Saturdays.
	Jam-e Jamshed	Daily, except Saturdays.
	Muslim Herald	Daily, except Sundays.
	Muslim Times	Fridays.
	Native Opinion	Tuesdays.
	O Anglo-Lusitano	Saturdays.
	Parsi and Praja Mitra	Daily.
	Railway Times	Fridays.
	Rast Goftar	Sundays.
	Reuter's Indian Journal	Daily.
	Reuter's Telegram Company, Ltd.	.....
	Sanjaya	Daily.
	Sanj Vartaman	Daily, except Sundays.
	Servant of India	Weekly.
	Shri Venkateshwar Samachar ..	Fridays.
	Sunday Tatler	Sundays.
	Times of India	Daily.
	Times of India Illustrated Weekly.	Wednesdays.
	United Press Syndicate * ..	.....
	Young India	Weekly.
Bowringpet	Kolar Gold Fields News	Tuesdays.
Budaon	Akhbor Zulqarnain	6th, 13th, 20th, and 27th of every month.
Calangute (Goa)	A Voz do Povo	Saturdays.

Stations.	Title in full.	Day of going to Press.
Calcutta	Albalagh	Fridays.
	Amrita Bazar Patrika	Daily.
	Asian	Fridays.
	Associated Press *	.....
	Bangabasi	Wednesdays.
	Bengalee	Daily, except Sundays.
	Bharata Mitra	Thursdays.
	Calcutta Intelligence Syndicate ..	.....
	Calcutta Samachar	Daily.
	Capital	Thursdays.
	Catholic Herald of India	Tuesdays.
	Collegian	Bi-Monthly.
	Empire (Calcutta Evening News).	Daily, except Sundays.
	Englishman	Daily.
	Hindoo Patriot	Daily, except Saturdays.
	Hitabadi	Wednesdays.
	Indian and Eastern Engineer ..	14th of each month.
	Indian Daily News	Daily, except Sundays.
	Indian Engineering	Thursdays.
	Indian Express	Once a month.
	Indian Field	Wednesdays.
	Indian Methodist Times	Last day of month.
	Indian Mirror	Daily.
	Indian News Agency	.....
	Indian Planters' Gazette ..	Saturdays.
	Indian Public Health	15th of each month.
	Indo-British Press Agency ..	.....
	Mussalman	Thursdays.
	Moslem Chronicle and Muhammadan Observer.	Thursdays.
	Railways and Shipping	11th, 15th and last day of every month.
	Reis and Rayyet	Saturdays.
	Reuter's Telegram Company, Limited.	.....
	Sanjibani	Wednesdays.
	Samay	Wednesdays.
	Sidaqat	Daily.
	Statesman	Daily.
	Swadesh	Sundays.
	Tarjuman	Daily.
	Telegraph	.....
	Times of India Illustrated Weekly.	Wednesdays.
	United Press Syndicate*	.....
	Young Men of India	Monthly.
Calicut	Balamitram	Monthly.
	Kerala Sanchari	Wednesdays.
	Manorama	Tuesdays and Fridays.
	Mitavadi	Weekly.
	West Coast Reformer	Sundays and Thursdays.
	West Coast Spectator	Wednesdays and Saturdays.

Stations.	Title in full.	Date of going to Press.
Cawnpore	Azad	Wednesdays.
	Cawnpore Journal	Daily.
	Englishman Bulletin	Daily.
	Reuter's Telegram Company, Limited.	.....
	Zamana	25th day of every month.
Chinsurah	Education Gazette	Tuesdays.
Chittagong	Jyoti	Wednesdays.
Cochin	Cochin Argus	Saturdays.
	Malabar Herald	Saturdays.
Cocanada	Ravi	Thursdays.
Colombo	Ceylon Catholic Messenger ..	Tuesdays and Fridays.
	Ceylon Independent	Daily.
	Ceylon Morning Leader	Daily.
	Ceylon Observer	Daily.
	Ceylonese	Daily.
	Dinakara Prakash	Mondays, Tuesdays, Thursdays and Saturdays.
	Dinamina	Daily, except Sundays.
	Dravida Mitran	Wednesdays and Saturdays.
	Gnanartha Pradipaya	Mondays and Thursdays.
	Islam Mittiran	Saturdays.
	Lakmina	Daily except Sundays.
	Sarasavi Sandaresa	Tuesdays and Fridays.
	Times of Ceylon	Daily.
Cuttack	Utkal Deepica	Fridays.
Contai	Nihar	Mondays.
Dacca	Dacca Gazette	Mondays.
	Dacca Prakash	Sundays.
	East	Sundays.
	Herald	Daily.
Darjeeling	Darjeeling Visitor and Advertiser.	Mondays.
	Indian Daily News (Darjeeling Edition).	Daily.
Dehra Dun	Bulletin	Twice Daily.
Delhi	Al-Mustansir	Daily.
	Associated Press	.....
	Durbar Bulletin	Daily.
	Hamdard	Daily.
	Indian News Agency	.....
	Morning Post	Daily, except Sundays.
	Pioneer Supplement	Daily.
Dharwar	Dharwarvritt	Wednesdays.
	Karnataka Patra	Fridays.
	Karnatakavritta and Dhananjaya	Tuesdays.
	Kshema Samachar	Thursdays.
	Raja Hansa	Daily.

Stations.	Title in full.	Day of going to Press.
Dhulia	Khandesh Vaibhav	Fridays.
Dibrugarh	Englishman Bulletin	Daily.
	Times of Assam	Fridays.
Gaya	Kayastha Messenger	Sundays.
Guntur	Deshabhimani	Daily.
Hubli	Kannad Kesari	Fridays.
Hyderabad, Deccan	Musheer-i-Deccan	Daily.
	Sahifa-i-Rozana	Daily.
	Usman Gazette	Daily.
Hyderabad, Sind ..	Hindvasi	Daily.
	Musafir	Saturdays.
	Sind Journal	Wednesdays.
	Sind Mail	Daily.
	Sindvasi	Daily.
Jaffna	Ceylon Patriot and Weekly Advertiser.	Tuesdays.
	Jaffna Catholic Guardian	Saturday Mornings.
	Sithia Veda Pathukavalan ..	Fortnightly.
	Vasavilan Jaffna Native Opinion	Fortnightly.
Jaffna (Vannarponnai) ..	Hindu Organ	Mondays and Thursdays.
Jorhat	Englishman Bulletin	.....
Jubbulpore ..	C. P. Standard	Daily.
	India Sunday School Journal ..	Third Thursday of every month.
Kakina	Rangpur-Dikprokash	Fridays.
Kankhal	Saddhram Pracharak	Tuesdays.
Karachi	Daily Gazette	Daily.
	Karachi Argus	Wednesdays.
	Karachi Chronicle	Saturdays.
	New Times	Daily.
	Parsi Sansar	Saturdays.
	Praja Mitra	Tuesdays and Fridays.
	Phœnix	Tuesdays and Fridays.
	Reuter's Telegram Company, Limited.	....
	Sind Observer	Wednesdays and Saturdays.
	Sind Sudhar	Saturdays.
	Star of India	Saturdays.
Khulna	Khulna Basi	Saturdays.
Kolhapur City	Vidyavilas	Fridays.
Kottayam	Kerala Bharati	Tuesdays and Fridays.
	Malayala Manorama	Wednesdays and Saturdays.
	Nazrani Deepka	Tuesdays.
Kurunegala	Abhinawa Kawata Angana ..	Days prior to the 1st and 15th of every month.
Lahore	Akhbar-i-Am	Daily.
	Associated Press	.....
	Bulletin	.....
	Civil and Military Gazette ..	Daily, (Sundays excepted).
	Desh	Daily

Stations.	Title in full.	Day of going to Press.
Lahore	Hindustan	Wednesdays.
	Paisa Akhbar	Daily.
	Punjabee	Daily.
	Punjab Observer	Wednesdays and Saturdays.
	Punjab Samachar	Fridays.
	Rajput Gazette	1st, 8th, 16th and 24th of every month.
	Reuter's Telegram Company, Limited.	.....
	Tribune	Daily, except Sundays.
	Urdu Bulletin	Daily.
	Watan	Thursdays.
Larkana	Khairkhah	Saturdays.
	Larkana Gazette	Fridays.
	Sind Patrika	Saturdays.
Lucknow	Advocate	Wednesdays and Saturdays.
	Anand	Thursdays.
	Indian Daily Telegraph	Daily.
	Indian Witness	Wednesdays.
	Kaukab-i-Hind	Wednesdays.
	Kayastha Mutual Family Pension Fund News.	15th day of every month.
	Muslim Gazette	Tuesdays.
	Oudh Akhbar	Daily, except Sundays.
Lyallpur	Loyal Akhbar	Wednesdays and Saturdays.
Madras	Al-Mazmun	On the first of every month.
	Andhra Patrika	Tuesdays.
	Anglo-Indian	Thursdays.
	Associated Press	.....
	Christian Patriot	Weekly.
	Hindu—See against *Mount Road*.	.....
	Indian Patriot	Daily.
	Indian Railway Journal	15th of every month.
	Jarida-i-Rozgar	Saturdays.
	Justice	Daily.
	Law Times	Saturdays.
	Madras Mail	Daily.
	Madras Times	Daily, except Saturdays.
	Muhhammadan	Mondays and Thursdays.
	Mukhbir-i-Deccan	Wednesdays.
	New India	Daily.
	Reuter's Telegram Company, Limited.	.....
	Shamshul Akhbar	Mondays.
	Swadesa Mitran	Daily.
	United Press Syndicate, Madras Agency.	.....
Madura	South Indian Mail	Mondays.
Mandalay	Burma Magnet	Saturdays.
	Upper Burma Gazette	Daily.
Mapuca	Futuro	Daily.
Margao (Goa) ..	Noticias	Mondays.
	Ultramar	Mondays and Fridays.

Stations.	Title in full.	Day of going to Press.
Matheran	Matheran Jottings	Tuesdays and Fridays.
Mattancheri	Chakravarthi	Saturdays.
Mirpurkhas	Mirpurkhas Gazette	Wednesdays.
	Zaminder Gazette	Thursdays.
Mirzapur City	Khichri Samachar	Saturdays.
Moradabad ..	Al-Musheer	4th, 11th, 18th, 25th of every month.
	Colonel	1st, 8th, 16th and 24th of every month.
	Meston News	4th, 12th, 20th and 28th of every month.
	Sitara-i-Hind	4th, 12th, 20th and 28th of every month.
Moulmein	Moulmein Advertiser	Daily.
	Rammenna Times	Tri-Weekly.
Mount Road, Madras ..	Hindu	Daily, except Sundays.
Mussoorie ..	Mussoorie Times	Thursdays.
	Pioneer Mussoorie Bulletin ..	Daily.
Muttra	Inniskilliner	7th of each month.
Muvattupuzha	Kerala Dheepika	Saturdays.
Mymensingh	Charu Mihir	Tuesdays.
Nagercoil	Travancore Times	Tuesdays.
Nagpur	Desha-Sewak	Mondays.
	Hitavada	Fridays.
	Maharashtra	Tuesdays.
	Nagpur and Berar Times ..	Fridays.
Naini Tal	Naini Tal Gazette	Wednesdays.
Navsari	Independent	Saturdays.
Nova Goa	Boletim do Comercio ..	Wednesdays.
	Heraldo	Daily, except Mondays.
	O'Commercio	Daily.
	Odebate	Mondays.
	O'Heraldo	Daily, except Sundays and holidays.
Ootacamund	South of India Observer and Nilgiri News.	Daily issue except Sundays.
Pandharpur	Pandhari Mitra	Sundays.
Panjim Goa	O'Crente	Saturdays.
Parur	Uttara Tharaka	Saturdays.
Pen	Sudhakar	Fridays.
Peshawar	Afghan	Daily.
	Peshawar Daily News	Daily.
	Reuter's Telegram Company, Ld.	.....
Poona	Deccan Herald	Daily.
	Dynana Prakash	Daily, except Mondays.
	Evening Despatch	Daily.
	Kesari	Tuesdays.
	Maharatta	Sundays.
	Pandit	Daily, and weekly on Wednesdays.
	Poona Mail	Daily.
	Rajkaran	Sundays.
	Sudharak or Reformer	Sundays.

Stations.	Title in full.	Day of going to Press.
Quetta	Baluchistan Gazette	Wednesdays and Saturdays.
	Quetta News War Bulletin ..	Daily.
Quilon	Desabhimani	Wednesdays.
Rajkot	Malayali	Wednesdays and Saturdays.
	Kathiawar Times	Wednesdays and Sundays.
Rangoon	Burma Sunday Times	.....
	Rangoon Gazette	Daily, except Mondays.
	Rangoon Times	Daily, except Sundays.
	Rangoon Mail	Saturdays.
Ratnagiri	Bakool	Saturdays.
	Satya Shodhak	Sundays.
Rawalpindi	Punjab Times	Saturdays and Wednesdays.
Satara	Shubha Suchaka	Fridays.
Satara City	Prakash	Wednesdays.
Secunderabad ..	Hyderabad Bulletin	Daily.
	Notice Sheet	Daily.
Shahjahanpur	Sarpunch	Daily.
Shikarpur (Sind)	Trade Advertiser (Waper-Samachar)	Saturdays.
Shillong	Assam Advertiser	Fridays.
Sholapur	Kalpataru	Sundays.
	Sholapur Samachar	Tuesdays.
Silchar	Englishman Bulletin	Daily.
	Surma	Sundays.
Simla	Associated Press	.....
	Indian News Agency	.....
	Indian War Cry	27th of each month.
	Pioneer Daily Bulletin	Week days.
	Reuter's Telegram Company, Limited.	.....
Sukkur	Sindhi	Saturdays.
	Sind Advocate	Thursdays.
Surat	Apakshapata	Saturdays.
	Deshi Mitra	Thursdays.
	Gujrat Mittra and Gujarat Darpan	Saturdays.
	Jain Mitra	Wednesdays.
	Peoples' Business Gifts	Monthly.
	Praja Pokar	Wednesdays.
	Surat Akhbar	Sundays.
Sylhet	Paridarsaka	Wednesdays.
Tamluk	Tamalika	Saturdays.
Tangail	Islam Rabi	Fridays.
Thana	Arunodoya	Sundays.
Tinnevelly	Kalpaka	Monthly.
Trichur	Lokaprakasam	Mondays.
Tiruvalla	Kerala Taraka	Wednesdays.
Trivandrum ..	Bharata Kesari	Bi-Weekly.
	Western Star	Tuesdays, Thursdays, and Saturdays.
Vizagapatam	Andhra Advocate	Fridays.
Wai	Modavritta	Mondays.
	Vrittasar	Mondays.
Yeotmal	Harikishore	Sundays.

INDIAN PRESS LAW.

The Newspapers (Incitements to Offences) Act, 1908, was passed in view of the close connexion between the perpetration of outrages by means of explosives and the publication of criminal incitements in certain newspapers. The Act deals only with incitements to murder, to offences under the Explosive Substances Act, 1908, and to acts of violence. It gives power in such cases to confiscate the printing press used in the production of the newspaper, and to stop the lawful issue of the newspaper. The procedure adopted in the Act follows the general lines of that provided in the Code of Criminal Procedure for dealing with public nuisances, with the addition that the final order of the magistrate directing the forfeiture of the press is appealable to the High Court within 15 days. It is further provided that no action can be taken against a press save on the application of a Local Government. When an order of forfeiture has been made by the magistrate, but only in that case, the Local Government is empowered to annul the declaration made by the printer and publisher of the newspaper under the Press and Registration of Books Act, 1867, and thereafter neither that newspaper nor any other which is the same in substance can be published without a breach of the law.

The Indian Press Act, 1910, was a measure of wider scope, the main object of which was to ensure that the Indian press generally should be kept within the limits of legitimate discussion.

The Act deals, not only with incitements to murder and acts of violence, but also with other specified classes of published matter, including any words or signs tending to seduce soldiers or sailors from their allegiance or duty, to bring into hatred or contempt the British Government, any Native Prince, or any section of His Majesty's subjects in India, or to intimidate public servants or private individuals.

The different sections of the Act have in view (i) Control over presses and means of publication; (ii) control over publishers of newspapers; (iii) control over the importation into British India and the transmission by the post of objectionable matter; (iv) the suppression of seditious or objectionable newspapers, books, or other documents wherever found.

As regards the first of these objects, it is laid down that proprietors of printing presses making a declaration for the first time under section 4 of the Press and Registration of Books Act, 1867, shall give security, which may, however, be dispensed with by the magistrate at his discretion; that the proprietors of presses established before the passing of the Act may similarly be required to give security if and when they are guilty of printing objectionable matter of the description to which the Act applies; and that, where security has been deposited, Local Governments may declare such security forfeit where it appears to them that the press has been used for printing or publishing such objectionable matter. When the initial security so deposited has thus been forfeited, the deposit of further security in a larger sum is required before a fresh declaration can be made under section 4 of the Press and Registration of Books Act, and, if thereafter, the press is again used for printing or publishing objectionable matter the further security deposited and the press itself may be declared forfeit.

Control over publishers of newspapers, the second main object of the Act, is provided for in a similar manner. The keeping of a printing press and the publishing of a newspaper without depositing security when required are punishable with the penalties prescribed for failure to make the declarations required by sections 4 and 5 of the Press and Registration of Books Act, 1867.

Other provisions deal with the cases of books or pamphlets printed out of India or secretly in India. The more efficient control over the importation and transmission by post of objectionable matter of the kind described in the Act is given by empowering the customs and post office authorities to detain and examine packages suspected of containing such matter, and to submit them for the orders of the Local Government.

The fourth object of the Act is attained by authorising the Local Government to declare forfeit any newspaper, book or other document which appears to it to contain matter of the prohibited description, and upon such a declaration the Act empowers the police to seize such articles and to search for the same.

In any case in which an order of forfeiture is passed by the Local Government, an application may be made to the High Court on the question of fact whether the matter objected to is, or is not, of the nature described in the Act. For the most part the object of the Act has been secured, as regards the local press, without recourse to the power of confiscating security.

Press Association of India.—At the end of 1915 this Association was formed in Bombay. According to the articles of constitution "Its objects shall be to protect the press of the country by all lawful means from arbitrary laws and their administration, from all attempts of the Legislature to encroach on its liberty or of the executive authorities to interfere with the free exercise of their calling by journalists and press proprietors, and for all other purposes of mutual help and protection which may be deemed advisable from time to time." Members pay a minimum subscription of Rs. 10 annually. The affairs of the Association are managed by a Council. *Honorary Secretary*: Mr. B. G. Horniman, The *Bombay Chronicle*.

Societies: Literary, Scientific and Social.

AGRICULTURAL AND HORTICULTURAL SOCIETY OF INDIA (Calcutta).—Founded 1820. Annual subscription Rs. 32. Entrance fee Rs. 8. *Secretary*, F. H. Abbott, 17, Alipore Road, Alipore.

AGRI-HORTICULTURAL SOCIETY OF BURMA.—*Secretary*, Capt. W. H. Allen, Victoria Park, Kandawglay.

AGRI-HORTICULTURAL SOCIETY OF MADRAS.—Established 1833. Quarterly subscription for members in Class A Rs. 7, in Class B Rs. 3. *Secretary*, P. F. Fyson, Mount Road, Teynampett, S. W., Madras.

ANTHROPOLOGICAL SOCIETY OF BOMBAY.—Founded 1886, to promote the prosecution of Anthropological research in India; to correspond with Anthropological Societies throughout the world; to hold monthly meetings for reading and discussing papers; and to publish a periodical journal containing the transactions of the Society. Annual subscription Rs. 10. *Secretary*, Shams-ul-Ulma Dr. Jivanji Jamshedji Modi, B.A., Ph. D., C.I.E., Town Hall, Bombay.

ASIATIC SOCIETY OF BENGAL (Calcutta).—*Secretary*, G. H. Tipper, M.A., 57, Park Street, Calcutta.

BHANDARKAR ORIENTAL RESEARCH INSTITUTE, POONA.—The Institute was inaugurated on the 6th of July 1917, the 80th birthday of Sir R. G. Bhandarkar, at the hands of H. E. Lord Willingdon who has consented to become its first President. Its objects are to provide an up-to-date Oriental Library, to train students in the methods of research and to act as an information bureau on all points connected with Oriental Studies. Sir R. G. Bhandarkar has already bequeathed to the Institute his valuable private library of Oriental books. Since the 1st of April 1918 the Government of Bombay have transferred to the Institute the unique collection of manuscripts (over 18,000) at the Deccan College together with a maintenance grant of Rs. 3,000 a year. Government have likewise entrusted to the Institute for the next five years the sole administration of the Budget grant of Rs. 12,000 a year on account of publication. Membership dues Rs. 10 a year or Rs. 100 compounded for life. *Secretary*, Dr. S. K. Belvalkar, 339, Narayan Peth, Poona.

BOMBAY ART SOCIETY.—Founded 1888, to promote and encourage Art by exhibitions of Pictures and Applied Arts, and to assist in the establishment and maintenance of a permanent gallery for Pictures and other works of Art. Annual exhibition every February. Annual subscription Rs. 10; Life Member Rs. 100. *Secretary*, S. V. Bhandarkar, Bombay.

BOMBAY BRANCH OF THE CLASSICAL ASSOCIATION.—The Classical Association was started in 1903 in London, to promote the development and maintain the well-being of classical studies. The Bombay Branch was founded in 1910; it numbers over 100 members; holds 5 or 6 meetings a year; and publishes a yearly journal. Subscription Rs. 6 for ordinary and Rs. 2-8-0 for associate members. *Secretary*, Mrs. Gray, 13, Marine Lines, Bombay.

BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY.—Founded 1804, to investigate and encourage Oriental Arts, Sciences and Literature. Annual subscription Rs. 50. *Secretary*, The Rev. R. M. Gray, Town Hall, Bombay.

BOMBAY NATURAL HISTORY SOCIETY.—Founded 1883, to promote the study of Natural History in all its branches. The Society has a membership of about 1,700 and a small museum with a representative collection of the different vertebrates and invertebrates found in the Indian Empire and Ceylon. A Journal is published quarterly which contains articles on different natural history subjects as well as descriptions of new species and local lists of different orders. In the more recent numbers, serial articles on game birds, common snakes, and common butterflies have been appearing. Annual subscription Rs. 15. Entrance fee, Rs. 10. *Honorary Secretary*, W. S. Millard, *Curator*, N. B. Kinnear, Office and Museum, 6, Apollo Street, Bombay.

BRITISH AND FOREIGN BIBLE SOCIETY.—Since 1811 the British and Foreign Bible Society has been at work in this country. It has 6 Auxiliaries in India and an Agency in Burma. The first Auxiliary was established in Calcutta, in 1811, then followed the Bombay Auxiliary in 1813, the Madras Auxiliary in 1820, the North India Auxiliary in 1845, the Punjab Auxiliary in 1863, the Bangalore Auxiliary in 1875, while the Burma Agency was founded in 1899. The Bible or some portion of it is now to be had in nearly 100 different Indian languages and dialects and the circulation throughout India and Burma reached 1,168,452 copies in 1917. The Bibles, Testaments, and Portions in the various Vernaculars are sold at rates which the very poorest can pay, and at considerable loss to the Society. Grants of English Scriptures are made to Students who pass the various University examinations, whose applications are countersigned by their Principals, as under:—

The 4 Gospels and the Book of Acts in 1 Vol. to Matriculates.
The New Testament and Psalms to Intermediates.
The Bible to Graduates.

Last year over 10,000 volumes were so distributed. Portions of Scriptures in the important vernaculars have been prepared in raised type for the use of the Blind and large grants of money are annually given to the different Missions, to enable them to carry on Bible women's work and Colportage.

Besides the British and Foreign Bible Society, there is Bible work carried on in India, Assam and Burma in a much smaller way by the Bible Translation Society—which is connected with the Baptist Missionary Society—the American and Canadian Baptist Mission, the National Bible Society of Scotland, and the Tranquebar Tamil Bible Society

The following table shows the growth in the British & Foreign Bible Society's work during the past few years in India & Burma :—

CIRCULATION OF THE B.F.B.S. IN INDIA.

Auxiliaries.	1917.	1916.	1915.	1914.	1913.
Calcutta	172,734	139,499	148,058	169,285	184,753
Bombay	202,407	189,594	184,937	181,452	178,720
Madras	275,802	275,264	233,420	263,805	280,552
Bangalore	32,974	34,265	36,336	35,658	36,233
North India	226,546	189,564	172,172	210,754	186,650
Punjab	150,366	157,680	115,391	122,224	92,484
Burma	107,623	105,127	117,948	117,518	117,225
Total copies of Scriptures ..	1,168,452	1,090,993	1,008,262	1,100,696	1,076,617

These returns do not include the copies which any Auxiliary has supplied to London or to other Auxiliaries and agencies during the year.

BRITISH MEDICAL ASSOCIATION (Bombay Branch).—Founded 1886, to promote Medical and the Allied Sciences and the maintenance of the honour and interests of the Medical Profession. *Secretary*, Dr. D. R. Bardi, Bombay.

BOMBAY MEDICAL UNION.—Founded 1883 to promote friendly intercourse and exchange of views and experiences between its members and to maintain the interest and status of the medical profession in Bombay. The entrance fee for Resident members Rs. 5, monthly subscription Rs. 2. Absent members Re. 1, and non-resident members yearly subscription Rs. 5. *President*: Dr. K. M. Dubash. *Secretaries :* Dr. R. D. Mody, Dr. A. K. Contractor. *Hon. Librarians* (Sir D. M. Petit, Medical Union Library) :— Dr. M. D. D. Gilder, Dr. Y. D. Gilder. *Treasurer :* Dr. M. P. Kerrawalla, 123, Esplanade Road, Bombay.

BOMBAY SANITARY ASSOCIATION.—Founded to create an educated public opinion with regard to sanitary matters in general; (*b*) to diffuse the knowledge of sanitation and hygiene generally, and of the prevention of the spread of disease amongst all classes of people by means of lectures, leaflets and practical demonstrations and, if possible, by holding classes and examinations; (*c*) to promote sanitary science by giving prizes, rewards or medals to those who may by diligent application add to our knowledge in sanitary science by original research or otherwise; (*d*) to arrange for homely talk or simple practical lectures for mothers and girls in the various localities and different chawls, provided the people in such localities or chawls give facilities. The Sanitary Institute Building in Princess Street, which has lately been built by the Association, at a cost of nearly Rs. 1,00,000 the foundation stone of which was laid by Lady Willingdon in March, 1914, and opened in March, 1915, is a large and handsome structure with a large Lecture Hall, Library, Museum, etc., and also provides accommodation for King George V Anti-Tuberculosis League Dispensary and Museum and the Malaria Office and the Lady Willingdon Scheme. *Hon. Secretary*: Dr. J. A. Turner, C.I.E., Executive Health Officer, Bombay.

EUROPEAN ASSOCIATION.—The European Association was established in 1883 under the title of the European and Anglo-Indian Defence Association and was re-established in 1912 under the title of the European Defence Association, but the present title was adopted in 1913. The Association has for its objects the general protection of European interests and the promotion of European welfare. The Association numbers 4,500. The Head Offices are at Grosvenor House, Calcutta. *President*, The Hon'ble Sir Archy Birkmyre. *Secretary*, Mr. Alec Marsh.

BRANCHES OF THE EUROPEAN ASSOCIATION.

ASSAM VALLEY, DIBRUGARH.—*Chairman*, Mr. E. L. Greenough. *Hon. Secretary*, Mr. A. L. Allum.

BIHAR, MOZUFFERPORE.—*Chairman*, Mr. P. Kennedy. *Hon. Secretary*, Mr. J. M. Wilson.

BOMBAY.—*Chairman*, The Hon'ble Mr. J. S. Wardlaw Milne. *Hon. Secretary*, Mr. A. W. S. Wise.

BURMA, RANGOON.—*Chairman*, Sir A. W. Binning. *Hon. Secretary*, Mr. R. Edmondson.

DARJEELING.—*Chairman*, The Hon'ble Mr. H. R. Irwin. *Hon. Secretary*, Mr. G. Wrangham-Hardy.

DELHI.—*Hon. Secretary*, Mr. R. E. Grant Govan.

DOOARS, JALPAIGURI.—*Chairman*, Mr. D. Gollan. *Hon. Secretary*, Mr. Duncan McTaggart.

MADRAS.—*Chairman*, Mr. J. H. Thonger. *Joint Hon. Secretaries*, Mr. H. H. Chettle and Mr. H. M. Spencer.

PUNJAB, LAHORE.—*Advisory Committee*, Mr. J. D. Bevan, Mr. E. H. Hardy and Dr. C. A. Owen, M.D., F.R.C.S.

SIND, KARACHI.—*Chairman*, Mr. G. Gordon. *Hon. Secretary*, Mr. R. D. Marshal.

SURMA VALLEY, SILCHAR.—*Chairman*, Colonel J. G. Knowles, C.I.E. V.D., A.D.C., *Hon. Secretary*, Mr. F. G. Ballantyne.

UNITED PROVINCES, CAWNPORE.—*Chairman*, Mr. T. Smith. *Hon. Secretary*, Mr. J. G. Ryan.

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE (Calcutta).—*Secretary*, Dr. Amrita Lal Sircar, 210, Bow Bazar Street, Calcutta.

INDIAN LIBERAL CLUB.—Started on 30th March 1917, to promote a systematic study of politics in general and Indian politics in particular, to organise free and well informed discussions on current political topics as well as on abstract questions to provide facility for collecting information in questions arising, or necessary to be raised, in the Imperial and Provincial Legislative Councils and to form and maintain a library.

Office, Servants of India Society, Sandhurst Road. *President*, Sir Narayan Chandavarkar. *Secretaries*, Mr. J. R.. Gharpure, B.A., LL.B., and Mr. C. S. Deole, B.A.

INDIAN ECONOMIC SOCIETY (BOMBAY).—Started in 1915, with the object of affording facilities for an accurate and scientific study of economics, for the formation and dissemination of current economic ideas and for collecting first hand information regarding the industry and commerce of the country with a view to the removal of difficulties in the way of their promotion and development. The Society arranges periodical discussions and publishes pamphlets and it holds weekly Marathi Class in Economics. Subscription ; a minimum of 6 Rs. a year. *President*, Sir Vithaldas D. Thackersey, *Secretaries*, Mr. C. S. Deole of the Servants of India Society, Mr. N. M. Muzumdar, Mr. Gulabchand Devchand, Prof. V. G. Kale and Mr. V. G. Dalvi. *Office*—Servants of India Society's Home, Sandhurst Road, Girgaon.

INDIAN MATHEMATICAL SOCIETY—Founded in 1907 for the advancement of Mathematical studies in India. It conducts a bi-monthly journal in which papers on mathematical subjects are published and maintains a library with current mathematical periodicals in all languages and new books in the subject. The library is located in the Fergusson College, Poona, whence the journals and books are circulated to members by post. The journal of the Society is published in Madras. There are about 150 members from all parts of India. *President*, Principal A. C. L. Wilkinson, M.A., Elphinstone College, Bombay. *Secretaries*, Prof. D. D. Kapadia, Poona, and Prof. M. T. Naraniengar, Bangalore. *Librarian*, Principal R. P. Paranjpye, Poona.

INDIAN SOCIETY OF ORIENTAL ART (Calcutta.) —*Joint Secs. and Treasrs.*, N. Blount and B. C. Law, P. O. Box No. 8, Calcutta.

INDIA SUNDAY SCHOOL UNION.—The India Sunday School Union is a large indigenous interdenominational Society having the sympathy and co-operation of the greater number of Missionary Societies in India. The great purposes of the Union are the promotion of systematic and careful Bible study, and the increased efficiency of Sunday Schools in India. Its operations extend beyond the borders of India itself to Arabia, Siam, Borneo and Assam. Upwards of 650,000 Sunday School scholars and teachers and 13,944 Sunday Schools are connected with the Union, speaking 60 Vernaculars. One Central and 40 Provincial Committees control its Indian work, which forms part of a world-wide movement with a membership of 28,000,000.

The India Union was founded in Allahabad in 1876. Yearly examinations are held for both teachers and scholars in 31 centres, for which medals, prizes, scripture awards, and certificates are granted to successful candidates, upwards of 20,000 entered these Exams. for 1913. Notes on the daily portions of the Interdenominational Bible Reading Association are published by the I. S. S. U. in English and 14 Vernaculars, and 50 editions of the S. S. Lesson Expositions are published in 20 Vernaculars. In addition, there is a large publication of literature dealing with all phases of child study and moral and religious training. The monthly publication of the Union is the *India Sunday School Journal*. The Teachers Training Department is under the care of Mr. E. A. Annett.

General Secretary of the Union, the Rev. R. Burges, India Sunday School Union Office, Jubbulpore.

MADRAS FINE ARTS SOCIETY.—*Secretary*; Edgar Thurston, Central Museum, Madras.

MADRAS LITERARY SOCIETY AND AUXILIARY OF THE ROYAL ASIATIC SOCIETY.—*Secretary*, W. F. Grahame, I.C.S., College Road, Nungambaukum.

NATIONAL INDIAN ASSOCIATION.—Founded in 1870. Its objects are :—(*a*) To extend in England, knowledge of India, and interest in the people of that country. (*b*) To co-operate with all efforts made for advancing Education and Social Reform in India. (*c*) To promote friendly intercourse between English people and the people of India. In all the proceedings of the Association the principle of non-interference in religion and avoidance of political controversy is strictly maintained. It has branches in Bombay, Madras, Bengal and

the Punjab. *Hon. Secretary*, Miss Beck, 21 Cromwell Road, London. Publication. *The Indian Magazine and Review*, a monthly Journal which chronicles the doings of the Association in England and in India, and takes note of movements for educational and social progress. It publishes articles about the East to interest Western readers, and articles about the West to interest readers in the East.

LIFE MEMBERS.—Ten Guineas Annual Subscriptions: Members one Guinea; Country Members, Ten Shillings; Associates (Students), Five Shillings.

PHILATELIC SOCIETY OF INDIA.—Annual subscription Rs. 20. *Secretary*, J. Godinho, Girgaum, Bombay.

PHOTOGRAPHIC SOCIETY OF INDIA (Calcutta). —Annual subscription Rs. 24 (Town Members) and Rs. 10 (Mofussil members). Entrance fee Rs. 20 and Rs. 10. *Secretary*. A. K. Taylor, 40, Chowringhee Road, Calcutta.

POONA SEVA SADAN.—This institution was started in 1909 by Mrs. Ramabai Ranade Mr. G. K. Devadhar and other ladies and gentlemen in Poona. It is now working independently though for a part of the intervening period it was conducted as a branch of the Bombay Seva Sadan. Its main object is to train women so as to make them self-reliant and generally to train them for missionary work undertaking educational and medical work for their sisters and brethren, especially in backward areas and working on a non-sectarian basis. The instruction is free except for the Music Classes. There are seven different departments sub-divided into 42 classes. Arrangements are made for training nurses and midwives at the Sassoon Hospital, Poona and a Hostel is maintained for them and also for those attending the Sub-Assistant Surgeons' Class. Classes are maintained for training Mistresses in Vernacular schools. This college is probably the only college in India maintained by a non-official, non-Christian missionary body teaching the full course. It has 72 students. The Practising School for little girls is attached to the Training College and has 179 students reading up to the Marathi VI Standard.

PRIMARY CLASSES FOR GROWN-UP WOMEN—are held up to the Marathi fifth standard and are attended by over 112 students. It is here that poor women are recruited for the work of teacher, nurse or midwife. Work room and music classes are also held. The total number of pupils on the rolls of all these classes is over 680 including about 120 duplications. Besides, in addition to the Nurses' hostel mentioned above the Institution maintains a second hostel with 42 inmates for the Training College and a third with 17 inmates for very poor women. Lady Willingdon is the Honorary Patroness of the Institution. President: Mrs. Ramabai Ranade; Honorary Secretary: Mr. Gopal Krishna Devadhar, M.A.; Lady Superintendent: Mrs. Jankibai Bhat.

RANGOON LITERARY SOCIETY.—*Secretary*, M. Hunter, 13, York Road.

RANGOON MUSICAL AND DRAMATIC SOCIETY. —Founded 1909. *Secretary*, Miss R. West, Dalhousie Street, Rangoon.

ROYAL SOCIETY OF ARTS, INDIAN SECTION.— This Society was founded in London in the 18th Century. Its recently published history by Sir Henry Trueman Wood, late Secretary of the Society, gives the following account of the Indian Section. In 1857, a proposition was made by Mr. Hyde Clarke who wrote to the Council suggesting that "a special section be formed for India, another for Australia, one for English America and so on." It was suggested that the Indian Section should meet once a fortnight for the reading of papers. Nothing came of the suggestion until ten years later when Mr. Hyde Clarke returned to England, and in 1868 he renewed his proposal, but only proposing the formation of a committee which should organise conferences on Indian subjects. This time the suggestion was taken up more warmly. Mr. Hyde Clarke himself was placed on the Council, and the Indian Conferences which soon developed into the Indian Section, were started. "The Indian Section thus established became a most important department of the Society. It has had great results in India by spreading information as to the directions which the development of Indian manufactures and Indian products could most usefully take, and in England by giving similar information as to the industrial resources and progress of India itself. The Section has received great help from the Indian press and it has in return been of service to the Indian press in supplying useful information to it. It has been of great value to the Society itself as the means by which many members have been added to its list, so that in fact, thanks to a very large extent to the work of the Indian Section and of the allied section for the Colonies, a large proportion of the present number of members come from the dependencies of the Empire abroad." *Secretary of the Society*, G. K. Menzies, M.A.; *Secretary of the Indian and Colonial Sections* G. Digby, C.I.E., 18, John Street, Adelphi, London, W. C. 2.

SERVANTS OF INDIA SOCIETY.—The Servants of India Society which was founded by the late Hon'ble Mr. Gopal Krishna Gokhale, C.I.E., in 1905, has its Head-quarters in Poona and its objects are "to train national missionaries for the service of India and to promote by all constitutional means the true interests of the Indian people." Its government is vested in the First member or President and a Council. On the death of Mr. Gokhale in February, 1915, the Hon'ble Mr. V. S. Srinivasa Sastri was elected President. He has again been re-elected for a further term of three years. It has at present four branches, *viz.*, (1) in Bombay- (2) in Madras, (3) in the United Provinces, (4) in Central Provinces. Each Branch consists of ordinary members, members under training and permanent assistants who work under the direction of a Senior Member. The branches engage both in propagandist and active work of political, educational, social, agricultural and philanthropic charac-

ter. A fair idea of the work of a branch can be had from a brief description of the operations of the Bombay Branch whose members have so far undertaken activities in various fields. (1) Social purity like the Holika Sammelan of Bombay, (2) Social reform organization under the auspices of the National Social Conference, (3) rousing public opinion about elementary education, (4) promotion of the cause of elevation and education of Indian women by building up institutions like the Seva Sadan, Poona, (5) Social Service as carried out by the Social Service League of Bombay, (6) spread of co-operative movement among the agriculturists, compositors in the city of Poona and mill-hands in Bombay. The Co-operative societies, as at Hadapsar in and other villages around Poona, started for the benefit of these poor people number over 25 with a total membership of over 1,200, capital of nearly one and half lakhs and a total turnover of three lakhs per year. 9 of these societies which are in Bombay for poor labouring classes are so conducted as to free their members entirely from their chronic indebtedness. Their membership consists of sweepers, scavengers, millhands numbering above 550 and debts amounting to nearly two lakhs of rupees have been cleared of. Moreover educational work is organized by starting a Co-operative Secretaries' Training Class in Bombay for 60 Secretaries from the various districts this year, (7) relief work connected with wide-spread calamities by organizing the Plague Relief Committee of Poona, which succeeded in making inoculation popular in the Deccan, the Salumbra Fire Relief Committee which arranged for the relief to sufferers for five years and by undertaking a scheme of non-official relief during the famines of 1907-08 and 1914 in the United Provinces, the famine in Gujarat and Kathiawar of 1911-12 and the famine of 1913 in the district of Ahmednagar, (8) organising public opinion on the question of Indians in South Africa, (9) its political work is conducted strictly on congress lines and thus it was able to start District Congress Committees in several wards of the city. These are now conducting a political quarterly, (10) it has started in Bombay an organisation called the Indian Economic Society with a view to promoting the study of Indian economics on right lines and also conducts a vernacular class. A new association called the Liberal Club has been started to carry on political propaganda. The Bombay Branch has systematically undertaken the training of Secretaries of Co-operative Societies in the Presidency. Government help in this scheme. Quite recently the United Provinces Branch organised a band of volunteers who rendered assistance, in a manner that drew general approbation, to the pilgrims at the last Kumbha Mela in Hardwar. The Society engages in journalistic work also, having in its control the *Hitavada*, an English weekly in Nagpur, the *Dnyan Prakash*, a Marathi daily in Poona, and the *Hindustani*, an Urdu weekly in Lucknow. The Society has recently started an English Weekly called *The Servant of India* The U. P. Branch has in addition undertaken the publication of pamphlets on public questions and has sent out three such publications.

The expenses incurred by the Central Home of the Society in Poona and its four branches exceed Rs. 40,000 a year and this amount is made up by contributions from Indians, rich as well as poor. The present number of workers enlisted by the Society is about 20, most of whom are University men of considerable standing.

President.—The Hon'ble Mr. V. S. Srinivas Sastri, B.A., L.T., Triplicane, Madras, Senior Member, Madras Branch. Mr. Gopal Krishna Devadhar, M.A., Senior Member, Bombay Branch. Mr. Natesh Appaji Dravid, M.A., Senior Member, Central Provinces Branch. Mr. Hirdayanath Kunzru, B.A., B.SC., Senior Member, Upper India Branch. Mr. Anant Vinayak Patwardhan, B.A., Senior Member, Business Branch, Poona. Messrs. Joshi, Kunzru and Vaze together with the senior members constitute the Council of the Society with the Hon'ble Mr. Sastri as its President. Mr. Anant Vinayak Patwardhan is the Secretary of the Council and also of the Society.

SEVA SADAN.—The Seva Sadan Society was started on the 11th of July, 1908, by the late Mr. B. M. Malabari. It is the pioneer Indian ladies' society for training Indian sisters ministrant and serving (through them) the poor, the sick and the distressed. The society has a habitation in Gamdevi, Bombay. One-half of the Building and Endowment Fund of Rs. 82,000 has been spent mainly in building at Gamdevi, and partly in the purchase of two acres of land at Santa Cruz for a "Sisters' Home" and other purposes.

The Society maintains the following institutions for training its probationers and for doing its other work. 1. A home for the Homeless. 2. An Industrial Home with various departments. 3. A Dispensary for Women and Children. 4. Ashrams. 5. Free educational classes and a Library and Reading-room. 6. Home-Classes in the quarters of the poor, and normal classes for training Marathi women for the teacher's profession. All these are for the benefit of poor women. *Secretary*, Miss B. A. Engineer, M.A., LL.B., *President*, Mrs. Ramabai Ranade, *Hon. Gen. Secretary*, the Hon. Mr. Lalubhai Samaldas, C.I.E., *Treasurers*, Sister Sushilabai and the Hon'ble Mr. Lalubhai Samaldas; *Trustees*, Sir Narayan Chandavarkar, Sir Bhalchandra Krishna, Sir V. D. Thackersey, the Hon. Mr. G. K. Parekh and the Hon. Mr. Lalubhai Samaldas, C.I.E.

CONSUMPTIVES' HOME SOCIETY.—This Society was started by the late Mr. B. M. Malabari on the 1st of June 1909. It was registered under Act XXI of 1860. It is an off-shoot of the Seva Sadan. Mr. Malabari secured a large grant of land in a Himalayan pine forest in Dharmpur (Simla Hills) from H. H. the Maharaja of Patiala, for a Sanitorium for Consumptives. The Sanitorium was started on June 1, 1909, and has been in existence ever since. Mr. Malabari collected an Endowment Fund of about Rs. 67,000 lodged with the Treasurer

Charitable Endowments, under Act VI of 1890. Nearly Rs. 1,37,000 have been spent on buildings, etc., and the current annual expenditure is about Rs. 26,000. Dr. Nanavati, L.M. & S., and B.Sc., is in charge of the Sanitorium.

SOCIETY FOR THE PROTECTION OF CHILDREN IN WESTERN INDIA.—*Office and Refuge :* Girgaon Back Road, Bombay.

Founded.—To prevent the public and private wrongs of children and the corruption of their morals ; to take action for the enforcement of the laws for their protection, and, if necessary to suggest new laws or amendments of the existing laws ; to provide and maintain an organisation for these objects ; and to do all other lawful things incidental or conducive to the attainment of the foregoing objects.

Subscription for annual membership, Rs. 10 for Life Membership, Rs. 100.

Honorary Secretaries : Mr. Mahomedbhoy Currimbhoy, Mr. N. V. Mandlik, B.A., LL.B., Mr. R. P. Masani, M.A.

WEST OF INDIA ANGLING ASSOCIATION.—The Association was started in 1912 at Poona, the headquarters were transferred to Bombay in 1915, and the membership has increased considerably since then. The rights for stocking, preserving and angling in Lake Sydenham at Walwhan, near Lonavla, have been obtained by the Association from the Tata Hydro-Electric Power and Supply Co. and a commencement has been made with stocking the lake with sporting fish but it will not be opened for angling for a few years except bottom-fishing for indigenous fish. A journal is published which contains articles on fishing, experiences in the rivers and lakes and on the coasts of India, the sporting fishes of the country and notes of general interest to Indian anglers.

Entrance fee Rs. 15, Annual subscription Rs. 10. *Patron*, H. E. Lord Willingdon. *President*, E. Comber. *Hon. Secretary* : G. V. E. Wesche-Dart, Bombay Club, and *Hon. Treasurer*, G. B. Adamson, C/o Russo-Asiatic Bank, Bombay.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION IN INDIA, BURMA AND CEYLON.—This was started in India in an organized and National way in 1896. The aim of the Association is to meet the needs of the girls and women who live in India from an Intellectual, Spiritual, Social and Physical standpoint. This is done in many ways in the 153 Associations that now flourish under the auspices of the National Young Women's Christian Association. The Associations in the big cities have a large membership and include all classes of the community. Clubs, Classes, Lectures, Commercial Courses, Music, Languages, Bible- and Mission Study, Social Intercourse, Physical Training, and all kinds of physical recreation are carried on as need arises in these City Associations. Boarding Homes are established in all the principal cities where teachers, nurses, business girls, students, apprentices, etc., can have a comfortable home with good wholesome food and congenial companionship from Rs. 20 per month. Travellers' Aid work is done and many travellers, especially in the port cities, find accommodation as they pass through employment is also found for women and girls. A useful feature of the association is the Holiday Homes that are conducted in the hills, where girls from the plains can find inexpensive accommodation and regain health and strength. Some of the homes accommodate as many as forty-five at one time and hundreds benefit during the season. The work of the Association in the large cities is managed by a staff of Y. W. C. A. Secretaries, who are fully trained and equipped to meet the many demands that are made on them. These Secretaries are supplied from America, Britain, Australia, Canada and India.

Many of the Associations are in small upcountry stations where a handful of members constitute the Branch, led by some lady in the station who is glad of this opportunity for service. The members of these small stations may be transferred, in the ever-changing life of India, into the larger cities and then they learn in a fuller way what the Association can do to help them in all-round development. In addition to the work of the city department described above, the student department (which is affiliated to the world's Christian student federation) has 47 branches in schools and colleges, while the vernacular department is carrying on valuable work in co-operation with Missionary societies in five different languages. The National Headquarters are in Bombay. The inter-denominational character of the Association is clearly kept in the forefront and ladies of many Christian denominations are on the Committee. The National Committee consists of thirty-two members, resident and non-resident, representative of the City, Student and Vernacular Departments in various sections of the country.

The Officers are : *President*, Mrs. Normand ; *Vice-Presidents*, Mrs. Gray, Mrs. McKenzie, Mrs. Edwards ; *Hon. Treasurer*, F. J. Clark ; *National General Secretary*, Miss Rena Carswell ; *National Business Secretary*, Miss Alice Shields. *The General Secretaries of the principal places are* : Bombay, Miss Cowdrey ; Calcutta, Miss Crowe ; Colombo, Miss Alexander ; Rangoon, Miss Ledwich ; Madras, Miss Downey ; Bangalore, Miss Meager ; Karachi, Miss O'Brian ; Lahore, Miss Denison ; Mussoorie, Miss Gregory ; Simla, Miss Rutherford ; Lucknow Miss Davies ; Naini Tal, Miss Mansem ; Jubbulpore and Nagpur, Miss Ellis. The Patroness of the Association is H. E. Lady Chelmsford, who is also President of the Simla Branch.

The National Office is in the British Foreign and Bible Society Building, 170, Hornby Road, Bombay.

The Official Organ of the Association is "Woman's Outlook in India," which has circulation of over 1,500 copies monthly.

This supplies women living in India with a good review at the price of Rs. 1-8-0 a year.

YOUNG MEN'S CHRISTIAN ASSOCIATION.—This Association, which was founded by the late Sir George Williams on June 6, 1844, seeks to unite those young men who, regard-

ing Jesus Christ as their God and Saviour according to the Holy Scriptures, desire to be His disciples, in their doctrine and in their life, and to associate their efforts for the extension of His kingdom among young men. The above is known as the "Paris Basis" and it is world-wide. It was adopted at the first World's Convention in Paris in 1855 and re-affirmed at the Jubilee World's Convention in Paris in 1905. The aim of the Association is through its religious, educational, and physical work to cater for the threefold—spiritual, mental and physical—needs of young men, and its policy is one of intense loyalty to the Church.

There are, as a rule, two classes of members. Any young man who is a member in full communion of any Protestant Christian Church may be an active or voting member and any young man of good character may be an associate.

The Young Men's Christian Association though relatively new to India, is spreading very rapidly. The local Associations are autonomous and governed by local Boards of Directors. These Associations in convention elect a National Council of European and Indian laymen, who are responsible for the supervision and expansion of all forms of the Association work. Both the National Council and the local Associations employ specially trained full time Secretaries. Over two-thirds of the Secretaries are supported from funds raised in India and Ceylon. The remaining Secretaries are supported by the Associations of North America, Australasia, and Great Britain, but their work is directed by committees in India, to whom their services are loaned for the time-being. The first paid Secretary came to India over twenty-five years ago, in response to an appeal from Madras. Soon afterwards the National Council was organised, and has become increasingly an indigenous institution.

There are now approximately 250 Associations with 15,000 members. Of these about one quarter are Europeans and three quarters are Indians, of whom over half are non-Christians. The following Associations own one or more buildings which serve as the local headquarters:—Allahabad, 2; Bangalore, 3; Alleppey, 1; Bombay, 4; Calcutta, 5; Calicut, 1; Coimbatore, 1; Colombo, 1; Galle, 1; Hyderabad, 1; Jubbulpore, 1; Karachi, 1; Lahore, 1; Madras, 1; Mandalay, 1; Maymyo, 1; Nagpur, 1; Naini Tal, 1; Rangoon, 3; Secunderabad, 1; Simla, 1.

In addition to buildings owned by the Association, bungalows have been rented to serve as headquarters in the following stations:—Ahmednagar, 1; Allahabad, 1; Bangalore, 2; Colombo, 2; Delhi, 1; Ferozpore, 1; Hyderabad, 1; Jamalpur, 1; Jhansi, 1; Jubbulpore, 1; Lahore, 2; Lucknow, 1; Madras, 1; Madura, 1; Mhow, 1; Palamcottah, 1; Multan, 1; Poona, 1; Pudukottah, 1; Rangoon, 1; Trivandrum, 1.

The departments of the National Council are Student, Railway, Rural, Literary, Army High School, Architectural Publication and Physical. The Student Christian Association is affiliated to the National Council and has branches in more than two score Colleges. The Railway Department is responsible for the development of work amongst railway employés. At Jamalpur the railway institute and apprentices Engineers, Club are operated by the Y. M. C. A. The Rural Department is organising village Y. M. C. A.'s and co-operative credit societies and promoting cottage industries. The Literary Department maintains three Secretaries:—J. N. Farquhar for Hinduism, K. J. Saunders for Buddhism and H. A. Walter for Mohammedanism. The object of the department is to promote a proper and sympathetic understanding of the non-christian religions and show their relationship to Christianity. At the beginning of the war there were but three Army Associations and five Army Secretaries in the whole of India. Now Association privileges are provided for British and Indian Troops in twenty-nine cantonments under the direction of seventy Secretaries and Assistants. Eighty Secretaries are at work in Mesopotamia, ten serve the Indian Expeditionary Force in Europe and Egypt and 19 in British East Africa. In addition to organising school boys' Y. M. C. A.'s the High School Department arranges for holiday camps for boys and High School teachers. The National Council employs its own architects who plan and construct its buildings, hostels, and playgrounds. The Physical Department specialises on physical education and is promoting the playground movement. A National Training School is established at Bangalore for the training of Indian Secretaries.

The "Association Press" is the Publication Department. A monthly magazine, the YOUNG MEN OF INDIA, is issued, and many books and pamphlets, both on Association subjects and on those of more general interest. Some of the latter have been issued in conjunction with the Oxford Press.

The Headquarters of the National Council is 5, Russell Street, Calcutta. The officers are:—

Patron:—His Excellency Lord Chelmsford, Viceroy and Governor-General of India.

Chairman:—Raja Sir Harnam Singh, K.C.I.E.

Treasurer:—W. R. Gourlay, Esq., C.I.E., I.C.S., 8, Government Place, Calcutta.

Joint Treasurer.—L. Robertson, Esq., I.C.S.

General Secretaries:—E. C. Carter; K. T. Paul.

The Bombay Association now possesses four well-equipped buildings:—Wodehouse Road, Lamington Road, Rebsch Street, and Reynolds Road. The President is the Hon'ble Mr. G. Carmichael, C.S.I., I.C.S., and the General Secretary is Mr. Wilbert B. Smith. In connection with each building there is a well managed hostel, one for Anglo-Indian apprentices, one for Indian students, one primarily for European business men, and one for Indians.

The Elton Hockey Tournament and the Condor Tennis Tournament are held annually under the auspices of the Bombay Association.

ASSOCIATION OF UNIVERSITY WOMEN IN INDIA.

The Association of University Women in India was established in 1913. Its objects are:—

(1) To facilitate intercommunication and co-operation between women belonging to the universities of the United Kingdom, resident in India.

(2) To provide a means of keeping in touch with the universities of the United Kingdom, by communication with the Federation of University Women, and otherwise as may seem expedient.

(3) To act as an organisation which shall afford opportunity for the expression of united opinion and for concerted action by university women on matters especially affecting them.

Membership is open only to those women who hold degrees in any university in the United Kingdom, or hold Oxford or Cambridge Honours Certificates. As the parent body in England, known as the Federation of University Women, declined to alter its constitution so as to include the many graduate women in India who have graduated elsewhere than in the United Kingdom, a kindred association promptly sprang into existence to include Indian and colonial women graduates. This association is confined to Bombay Presidency and is known as the **Women Graduates' Union.** *Secretary*

Mrs. Anstey, Dongarsi Road, Malabar Hill.

The Association of University Women has four branches. The addresses of the Honorary Secretaries are as follows:—

Calcutta .. Miss Hinde, Diocesan College.
Bombay .. Mrs. Houston, 41 Marine Lines
Allahabad .. Mrs. Daniels, 11 Muir Road.
Delhi, Simla .. Mrs. Molesworth, c/o Major Molesworth, R.E.

The Delhi Branch only came into existence in 1918. The United Provinces Branch is somewhat scattered. The Calcutta and Bombay Branches are influential, and have repeatedly intervened with good effect to educate public opinion with regard to subjects affecting women. They have, for instance, made investigations on behalf of the Education Department, Government of India, the Calcutta University Commission, etc. They have been the means of introducing women on to University Senates and Municipality. The Calcutta Branch carried through an important exhibition of Food Products with the double object of discovering:—

(1) What were the exact resources of the country.

(2) How firms and individuals could be induced to develop these resources, to find substitutes for imported goods and to improve existing methods of preparation of indigenous food products.

The most valuable part of the work of the Association has been the establishment of **Women's Employment Bureaux** in Calcutta and Bombay. The work of mobilising women has been difficult in every country, not for want of good will on women's part but for want of machinery and organisation. The Association of University Women realised that, as the only body of educated Englishmen in this country, it was called upon to provide the necessary organisation. Bureaux were formed and were the means of (1) helping many employers to get into touch with the available reserve of women labour; (2) showing trained women where their services were most needed and (3) training; inexperienced workers who had nothing but their good will to offer. The Bureaux have been remarkably successful and in some months placed as many as 40 per cent. of their applicants. The Bombay Bureaux was taken over in June 1918 by the National Service Bureau, Government of Bombay, in order that men as well as women might have the benefit of trained assistance and advice. As a link between the rapid developments of women's work in England and the corresponding adjustments which can be adopted in this country, the Association of University Women has a useful function to perform.

TABLE OF WAGES, INCOME, &c.

Showing the amount for one or more days at the rates of 1 to 16 Rupees per Month of 31 Days.

Rupees.	1			2			3			4			5			6			7			8			9			10			11			12			13			14			15			16		
Days.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
1	0	0	6	0	1	0	0	1	6	0	2	0	0	2	6	0	3	1	0	3	7	0	4	1	0	4	7	0	5	1	0	5	8	0	6	2	0	6	9	0	7	3	0	7	9	0	8	3
2	0	1	0	0	2	0	0	3	1	0	4	1	0	5	1	0	6	2	0	7	2	0	8	3	0	9	3	0	10	3	0	11	4	0	12	4	0	13	5	0	14	5	0	15	6	1	0	6
3	0	1	6	0	3	1	0	4	7	0	6	2	0	7	8	0	9	3	0	10	10	0	12	4	0	13	11	0	15	5	1	1	0	1	2	6	1	4	2	1	5	8	1	7	3	1	8	9
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PRINCIPAL CLUBS IN INDIA.

Name of Club.	Established	Club-house.	Subscription.			Secretary.
			Ent.	Annual	Monthly.	
			Rs.	Rs.	Rs.	
ABBOTTABAD	..	Abbottabad, N. W. F. Provinces.	16	..	10	Capt. L. Mellesh Jackson.
ADYAR	1890	Madras	75	12	4	C. Mainprice.
AGRA	1863	Agra Cantonment ..	50	..	7	Capt. F.B.W. Jacomb.
AHMEDNAGAR	1889	....	32	..	10	F. C. Hirst.
AIJAL	1893	Lushai Hills, E. B. and Assam.	32	..	10	H. G. Bartley.
AJMERE	1883	Kaiser Bagh	50	..	15	Dr. R. G. Robson.
AKOLA	1870	Berar	100	..	9	Lyon Scott.
ALLAHABAD	1868	Allahabad	100	..	9	R. W. Badlock.
AMRAOTI	..	....	100	..	7	W. A. Forbes.
AMRITSAR	1894	Amritsar	20	..	7	J. Mitchell.
BANGALORE UNITED SERVICE.	1868	38, Residency Road ..	100	12	7	Fletcher Norton.
BAREILLY	1883	Municipal Gardens ..	32	..	9	Lt.-Col. H. B. G. Walton, R.A.M.C.
BARISAL	1864	Backerganj, Barisal ..	25	..	12	J. C. H. Macnair.
BARRACKPUR	1850	Grant Trunk Road, S, River Side.	48	..	10	S. A. Fairweather and G. A. K. Hutton.
BASSEIN	1881	Fytche Street, 50, Bassein, Burma.	50	..	10	B. A. Zaiman.
BELGAUM	1884	Close to Race Course..	50	..	10	Lt.-Col. A. F. W. King.
BENARES	..	....	20	..	14	H. R. Roe.
BENGAL	1827	33, Chowringhee Road, Calcutta.	300	15	13	Col. W. Weallens.
BENGAL UNITED SERVICE.	1845	29, Chowringhee Rd...	150	18	10	Capt. A. D. Buzzard.
BOMBAY	1862	Rampart Row ..	100	..	6	C. L. Sandes.
BURMA	1885	Merchant Street, Rangoon.	50	..	6	W. T. McIntyre.
BYCULLA	1833	Bellasis Rd., Bombay.	200	12	10	R. T.H. Mackenzie.
CALCUTTA	1907	13, Russell Street ..	100	..	..	D. Lindsay and N. Gupta, C.I.E.
CALCUTTA TURF ..	1861	49, Theatre Road ..	150	25	..	J. Hutcheson.
CAWNPORE	1844	Cawnpore	50	8	..	Major H. C. Buckley, I. M. S.
CHAMBA	1891	Dalhousie, Punjab ..	50	..	14	Capt. H. R. Hoods.
CHITTAGONG	1878	Pioneer Hill, Chittagong.	50	..	10	E. A. Bird.
CLUB OF CENTRAL INDIA.	1885	Mhow	50	..	8	Major Charles T. Lamman.
CLUB OF WESTERN INDIA.	1865	Elphinstone Road, Poona.	200	..	6	Lt.-Col. N. Leslie.
COCHIN	1876	....	50	..	5	L. Walker.
COCONADA	1856	Coconada	70	..	10	L. C. Parton.
COIMBATORE	1868	Coimbatore	50	..	7	W. I. Campbell.
COONOOR	1894	Coonoor, Nilgiris ..	50	12	4	W. Rhodes James.
DACCA	1864	Dacca	50	..	14	Capt. E. D. Dallas Smith.

Name of Club.	Established.	Club-house.	Subscription.			Secretary.
			Ent.	Annual	Monthly.	
			Rs.	Rs.	Rs.	
DARJEELING	1868	Auckland Road ..	70	..	7	F. M. Timme.
DELHI	1898	Ludlow Castle, Delhi.	32	..	10	J. Smith.
HIMALAYA	1841	Mussoorie	100	12	10	W. Bell.
JHANSI	1887	Next to Public Gardens, Jhansi.	50	..	9–8	Lt. A. T. Logan.
MADRAS	1831	Mount Road, Madras.	250	92	10	Captain W. B. F. Davidson.
MADRAS COSMOPOLITAN.	1873	Mount Road	..	12	36	The Hon. Mr. T. Rangachariar.
MALABAR	1864	Beach Road, Calicut..	50	12	6	H. Hadow.
MAYMYO	1901	....	100	12	10	E. A. C. Walker, I.S.O.
MOOLTAN	1892	Mooltan	30	..	12	Major J. A. S. Daniell, D.S.O.
NAINI TAL	1864	....	100	..	5	Capt. J. O. Nelson.
OOTACAMUND ..	1840	Ootacamund, Nilgiri Hills.	150	12	5	A. Rowland.
ORIENT	..	Chaupatty, Bombay..	150	..	6	C. N. Wadia and Lt.-Col. Barnardo.
PEGU	1871	Prome Rd., Rangoon.	150	12	..	Francis H. Tod.
PESHAWAR	1883	Peshawar	32	..	10	Capt. I. M. Conway Poole.
PUNJAB	1879	Upper Mall, Lahore ..	150	..	12	A. R. Ross Redding.
QUETTA	1879	Quetta	60	..	15	Major B. Leicester.
RANGOON GYMKHANA.	1874	Halpin Rd., Rangoon.	75	6	7	W. B. Clover.
RANGOON BOAT CLUB..	..	Royal Lakes, Rangoon	48	..	3	R. R. Yeomans.
RAJPUTANA	1880	Mount Abu	50	48	8	K. G. Richardson.
ROYAL BOMBAY YACHT.	1880	Apollo Bunder ..	250	18	8	G. C. Plinston.
SATURDAY	..	7, Wood St., Calcutta.	..	..	..	J. A. Tassie.
SECUNDERABAD ..	1883	Secunderabad, Deccan	100	..	8	A. V. Crighton.
SHILLONG	1878	Northbrook Road, Shillong.	50	..	12	C. H. Holder.
SIALKOT	..	Sialkot, Punjab ..	32	..	6	Capt. S. N. Herdon, A.R.O.
SIND	1871	Karachi	200	12	6	W. U. Nicholas.
TRICHINOPOLY ..	1869	Cantonment	50	..	6	A. E. Donalson.
TUTICORIN	1885	Tuticorin	50	..	8	Duncan Rewil.
UNITED SERVICE CLUB	1866	Simla	200	..	..	Major H. M. Alexander.
UNITED SERVICE CLUB, LUCKNOW.	1861	Chutter Manzil Palace.	50	..	8	N. Calder.
UPPER BURMA ..	1889	Fort Dufferin, Mandalay.	50	..	8	H. C. Gadsden.
WESTERN INDIA TURF.	..	Bombay and Poona ..	50	20	..	Maj. J. E. Hughes absent on Military Duty. Ag. Secretary J. Reynolds.
WILLINGDON SPORTS .	1917	Clerk Road, Bombay..	150	75	..	J. E. Jackson.
WHEELER	1863	The Mall, Meerut ..	50	..	9	Captain H. Watts.

The Church.

In the ordinary acceptance of the term there is no established Church in India. An Ecclesiastical Establishment is maintained for providing religious ministrations, primarily, to British troops, secondarily to the European civil officials of Government and their families. Seven out of the eleven **Anglican Bishops** in India are officers of the Establishment, though their episcopal jurisdiction far transcends the limits of the Ecclesiastical Establishment. The stipends of the three Presidency Bishops are paid entirely by Government, and they hold an official status which is clearly defined. The Bishops of Lahore, Lucknow, Nagpur and Rangoon draw from Government the stipends of Senior Chaplains only but their episcopal rank and territorial titles are officially recognised. The Bishops of Chota Nagpur, Tinnevelly-Madura, Travancore-Cochin, Dornakal and Assam are not on the establishment. The new Bishopric of Assam was created in 1915. In its relations with Government it is subordinate to the see of Calcutta. But the maintenance of the Bishopric is met entirely from voluntary funds.

The **ecclesiastical establishment** includes four denominations—Anglican, Scottish, Roman and Wesleyan. Of these, the first two enjoy a distinctive position, in that the Chaplains of those denominations (and in the case of the first-named the Bishops) are individually appointed by the Secretary of State and rank as gazetted officers of Government. Throughout the Indian Empire there are 134 Anglican and 18 Church of Scotland chaplains whose appointments have been confirmed. The Roman Catholic and Wesleyans receive block-grants from Government for the provision of clergy to minister to troops and others belonging to their respective denominations. The Wesleyan Methodist Church has a staff of military chaplains in India who receive a fixed salary from Government and 25 chaplains working on a capitation basis of payment by Government. Churches of all four denominations may be built, furnished and repaired, wholly or partly at Government expense.

In the Anglican Communion a movement towards **Synodical Government** was making great progress, when, in the course of the year 1914, serious legal difficulties were encountered. The Bishops were advised that their relations with Canterbury and the Crown precluded the establishment of synods on the basis adopted by the Anglican Church in America, Japan, South Africa and other countries where it is not established by the State. It is stated that in course of time those relations may be modified so as to admit of the establishment of synodical government in India. Meanwhile Diocesan Councils are being adopted as a make-shift measure. These Councils possess synodical characteristics, but are devoid of any coercive power.

So far as the European and Anglo-Indian communities are concerned the activities of the Church are not confined to public worship and pastoral functions. The **education** of the children of those communities is very largely in the hands of the Christian denominations. There are a few institutions such as the La Martiniere Schools; on a non-denominational basis; but they are exceptional. In all the large centres there exist schools of various grades as well as orphanages, for the education of Europeans and Anglo-Indians under the control of various Christian bodies. The Roman Catholic Church is honourably distinguished by much activity and financial generosity in this respect. Her schools are to be found throughout the length and breadth of the Indian Empire; and they maintain a high standard of efficiency. The Anglican Church comes next, and the American Methodists have established some excellent schools in the larger hill-stations. The Presbyterians are also well-represented in this field, particularly by the admirable institution for destitute children at Kalimpong, near Darjeeling. Schools of all denominations receive liberal grants-in-aid from Government, and are regularly inspected by the Education Departments of the various provinces. Thanks to the free operation of the denominational principle and its frank recognition by Government, there is no "religious difficulty" in the schools of the European and Anglo-Indian communities.

Christian Missions.

The tradition that St. Thomas, the Apostle, was the first Christian missionary in India is by no means improbable. History, however, carries us no further back than the sixth century, when a community of Christians is known to have existed in Malabar. Since then the so-called **Syrian Church** in south-west India has had a continuous life. Except in its infancy this Church (or rather these Churches; for the Syrian Christians are now divided into four communions) has displayed little of the missionary spirit until quite recent times. Western Christianity was first introduced into India by the Portuguese, who established their hierarchy throughout their sphere of influence, Goa being the metropolitical see of the Indies. St. Francis Xavier, a Spaniard by race, took full advantage of the Portuguese power in Western India to carry on his Christian propaganda. His almost super-human zeal was rewarded with much success, but many of the fruits of his labour were lost with the shrinkage of the Portuguese Empire. It is really to the work of the missionaries of the **Propaganda** in the 17th century that the Papacy owes its large and powerful following in India to-day. The Roman Catholics in India number 1,904,006, of whom 379,251 were added during the decade 1901-1911. The total of "Syrian" Christians (exclusive of those who while using the Syrian liturgy, are of the Roman obedience) is 315,612, as against 248,741 in 1901. Protestant Christians (the term throughout this article includes Anglicans) number 1,636,731, an increase of 486,986 since 1901. Thus, the total number of Christians of all denominations in India is now close on four millions. In fact it probably exceeds that figure at the present moment, as these statistics are taken from the Census Report of 1911, and the rate of increase during the previous decade was nearly 100,000 per annum.

The Protestant Churches made no serious attempt to evangelise India till the beginning of the nineteenth century. They have thus been at work in the Indian mission field for something over 100 years, and the statistical results of their efforts are given above. It is now, however, generally recognised that Christian missions are producing indirect effects in India which lend themselves only incompletely to any sort of tabulation. The main agency of this more diffusive influence of Christianity is the missionary school and college. The **Protestant missions** fill a considerable part in the elementary education of the country. According to the *Year Book of Missions in India*, 1912, they are teaching 446,000 children in 13,204 elementary schools, mostly situated in villages. This represents one-ninth of the total of elementary schools and scholars throughout the Empire. The majority of children in these schools are non-Christians. The same is true also of the high schools and in a still greater degree of the colleges. The former number 283 with 62,600 male and 8,400 female pupils. There are 38 colleges affiliated to Universities, containing 5,488 male and 61 female students. Of these as many as 5,241 are non-Christians. From the standpoint of missionary policy much importance is attached to these agencies for the indirect propagation of the Christian faith. The statesman and the publicist are chiefly interested in the excellent moral effect produced by these institutions amongst the educated classes, and the higher educational ideals maintained by their staffs. The principal **University colleges** under Protestant auspices are the Madras Christian College; the Duff College, Calcutta; the Wilson College, Bombay; and the Foreman College, Lahore. All these are maintained by Presbyterian societies, either British or American. The Roman Catholics have a large number of educational institutions, ranging from small village schools to great colleges preparing students for University degrees. But the proportion of Christian students in their institutions is very much larger than in those of the Protestant bodies. The proportion of literates amongst native Roman Catholics is probably lower than amongst the Protestant converts; but compared with Hindus and Mahomedans it is conspicuously higher. The Roman Catholics have some 3,000 elementary schools in which 98,000 boys and 41,000 girls are receiving instruction. In middle and high schools they have 143,000 boys and 73,000 girls and in University colleges about 5,000 students of both sexes. These figures, however, include a large proportion of Europeans and Eurasians, who are an almost negligible quantity in Protestant mission schools and colleges.

More recent, but producing even more widespread results, is the **Philanthropic work** of Christian missions. Before the great famine of 1878, missionaries confined themselves almost exclusively to evangelistic and educational activity. The famine threw crowds of destitute people and orphan children upon their hands. Orphanages and industrial schools became an urgent necessity. But the philanthropic spirit is never satisfied with one kind of organisation or method. A great stimulus was also given to medical missions. **Hospitals and dispensaries** have sprung up in all parts of the mission field; and leper asylums are almost a monopoly of Christian missionary effort. In 1911 the total number of medical missionaries working under Protestant societies in India was 118 men and 217 women, the majority of the former being also ordained ministers of religion. There are 184 industrial institutions in which 59 different arts and crafts are taught, ranging from agriculture to type-writing. In this department the **Salvation Army** hold a prominent place; and the confidence of Government in their methods has been shown by their being officially entrusted with the difficult work of winning over certain criminal tribes to a life of industry. The indirect effect of all this philanthropic activity under missionary auspices has been most marked. It has awakened the social conscience of the non-Christian public, and such movements as "The Servants of India" and the mission to the Depressed Classes are merely the outward and visible sign of a great stirring of the philanthropic spirit far beyond the sphere of Christian missionary operations.

Anglican Missionary Societies.

The Church Missionary Society carries on work in India in seven different missions—the United Provinces, South India, Travancore and Cochin, Bengal, Western India, Punjab and Sind and the Central Provinces and Rajputana. The names are in order of seniority. Work was begun in what are now called the United Provinces in 1813, in Bombay in 1820, in the Punjab in 1851, and in the Central Provinces in 1854. The Society has always kept Evangelistic work well to the fore; but it also has important medical missions, especially on the N.-W. Frontier, and many schools of the Primary, Middle and High standards. The Church of England Zenana Missionary Society is an offshoot of the C. M. S. controlling the work of 162 missionary ladies. The number of ordained European missionaries of the C. M. S. in India and Ceylon is 160, European laymen 30 and European laywomen 258. The Society claims a Christian community of 2,21,359 of whom 63,655 are adult communicants.

Society for the propagation of the Gospel.—Statistics of the work of this Society are not easily ascertained, as much of it is done through Diocesan institutions, which, while financed and in many cases manned by the S. P. G., are entirely controlled by the Diocesan authorities. The best known of the S. P. G. missions is that at Delhi, commonly called the Cambridge Mission to Delhi, carrying on educational work at St. Stephen's College and School. At the College there are about 200 students under instruction, and at the High School 800. The College hostels accommodate 100 students. Missions to the depressed classes exist in Burma, in the Ahmednagar District and in several parts of South India, especially in the Diocese of Tinnevelly-Madura. There are 1,16,000 Indian Christians under the ægis of the S. P. G.; 90 ordained European missionaries and 98 European lady workers.

Other Anglican Societies.—The Oxford Mission to Calcutta was started in 1880.

It works in the poorest parts of Calcutta and also at Barisal. There are 11 mission-priests of this Society, and 16 Sisters. In addition to its work amongst the poor, the Oxford Mission addresses itself to the educated classes in Bengal and issues a periodical called *Epiphany*, which is known all over India.

The Society of St. John the Evangelist (commonly known as the Cowley Fathers) has houses at Bombay and Poona, and small stations in the Bombay Konkan. In Bombay its missionary work centres round the Church of Holy Cross, Umarkhadi, where there is a school and a dispensary. The Christians are chiefly drawn from the very poorest classes of the Bombay population. At Poona the Society co-operates with the Wantage Sisters and in Bombay with the All-Saints Sisters. Other Anglican sisterhoods represented in India are the Clewer Sisters at Calcutta and the Sisters of the Church (Kilburn) at Madras. The St. Hilda's Deaconesses' Association of Lahore carries on important educational work (chiefly amongst the domiciled community) in the Punjab. The mission of the Scottish Episcopal Church at Nagpur, the Dublin University Mission at Hazaribagh, and the Mission of the Church of England in Canada working at Kangra and Palampur (Punjab) should also be mentioned under the head of Anglican Missions.

Bengal Ecclesiastical Department.

Vacant .. .. Lord Bishop of Calcutta and Metropolitan of India.

SENIOR CHAPLAINS.

Stokoe, Rev. Cecil George, M.A. .. .. .. Services placed at the disposal of Assam Administration.
Firminger, Ven'ble Walter Kelly, M.A., B.D. .. Archdeacon of Calcutta, and Chaplain of St. John's, Calcutta.
Stuart, Canon Robert William Hall, B.A. .. .. St. Paul's Cathedral and Presidency Jail.
Smith, Canon Joseph Frank, B.A., A.K.C. .. .. St. James', Calcutta.
Keeling, Rev. Ernest William Phillips, B.A. .. Services placed at the disposal of the Punjab Administration.
Drawbridge, Rev. W. H., M.A. .. .. .. Services placed at the disposal of Government of Bihar and Orissa.
Parker, Rev. William Almair Hedley .. .. Additional Chaplain, St. John's, Calcutta.
Crozier, Rev. Philip Horsefall .. .. .. Chaplain, Darjeeling.
Penley, Rev. Horace Octavius, M.A. .. .. St. Thomas' Church, Calcutta.

And 13 Junior Chaplains.

CHAPLAINS OF THE CHURCH OF SCOTLAND.

Thomson, Rev. William, M.A. .. .. .. Presidency Senior Chaplain. Senior Chaplain, St. Andrew's Church, Calcutta.
Fairlie, Rev. John, M.A. .. .. Second Chaplain, St. Andrew's Church, Calcutta.

CHAPLAINS OF THE CHURCH OF ROME.

Meuleman, The Most Reverend Dr. Brice, S.J. .. Archbishop.
Carbery, Rev. Fr. Philip, S.J. .. .. .. Chaplain, Alipore Central Jail.

Bombay Ecclesiastical Department.

Palmer, Right Reverend Edwin James, M.A. .. Lord Bishop of Bombay.
Barham, Rev. C. M., M.A. (on leave for 3 months from December). Archdeacon of Bombay and Bishop's Commissary, and Chaplain of Colaba.
Bowen, John Cuthbert Grenside .. .. .. Registrar of the Diocese.

Coles, Rev. A. H. .. ..
Heywood, Rev. R. S. .. ..
Joshi, Rev. D. L. .. .. } Honorary Canons of Bombay Cathedral.
King, Rev. C. .. ..
Rivington, Rev. C. S. .. ..

SENIOR CHAPLAINS.

Foote, Rev. Harold .. .. Camp, Aden.
D'Alessio, Rev. Edward Samuel John, P.A. .. .. Ahmedabad.
Mould, Rev. Horace .. .. On Military duty.
Kennelly, Rev. W. J. M. .. .. St. Paul's, Poona.
Tibbs, Rev. Philip Gordon, B.A. .. .. .. Kirkee.
Arnould, Rev. Henry Lloyd M.H. .. .. .. St. Mary's, Poona.

And 15 Junior Chaplains.

CHAPLAINS OF THE CHURCH OF SCOTLAND.

Matthew, Rev. John Crombie, M.A., B.D. .. .. Senior Presidency Chaplain.

And 3 Senior Chaplains and 2 Probationary Chaplains.

CHAPLAINS OF THE CHURCH OF ROME.

Eyr, The Very Rev. A. .. .. Presidency.

Madras Ecclesiastical Department.

Whitehead, Right Reverend Henry, D.D.; Offg. Metropolitan .. .. Lord Bishop of Madras.
Cox, Ven'ble Lionel Edgar, M.A. .. .. .. Archdeacon and Bishop's Commissary.
Rowlandson, Frederic, B.A., LL.B. .. .. .. Registrar of the Diocese and Secretary to the Lord Bishop.

SENIOR CHAPLAINS.

Breay, Rev. Christopher Francis, M.A. .. .. St. Thomas' Mount with Pallavaram.
Bull, Rev. Edmund .. .. St. Thomas' Mount with Pallavaram.
Giles, Rev. Clement Douglas, M.A. .. .. .. Fort St. George.
Flynn, Rev. Hugh Hamilton .. .. .. Secunderabad.
Heycock, Rev. Francis Wheaton, M.A. .. .. Mercara and Mysore.
Nuttall, Rev. Frank .. .. Trimulgherry.
Creak, Rev. Ellrick Havelock .. .. .. N. and S., George Town.
Morton, Rev. Bertram Mitford .. .. .. Junior Joint Chaplain, St. Georges'.
Stone, Rev. Henry Cecil Brough .. .. .. Services placed at the disposal of the Government of India, Army Department.
Lowsley, Rev. W. Ashbel .. .. Coimbatore.
Jervis, Rev. E. O. .. .. Services placed at the disposal of Army Department.
Piers, Rev. S. O. .. .. Ag. Junior Joint Chaplain, St. George's Cathedral.
Bridge, Rev. Henry Noel .. .. Trichinopoly.
Proctor, Rev. Francis Owen.. .. .. .. Coonoor.
Wright, Rev. G. A. Arthur .. .. Vizagapattam.

And 15 Junior Chaplains.

CHURCH OF SCOTLAND.

Gillan, Rev. David Hedley, M.A., B.D. .. .. St. Andrew's Church, Madras.
Phillip, Rev. James Gibson .. .. St. Andrew's Church, Bangalore.
Mitchell, Rev. James Donald, M.A., B.D. .. .. Junior Chaplain, St. Andrew's Church, Secunderabad.

Assam Ecclesiastical Department.

Stokoe, Rev. C. G. .. .. Shillong.
Wilcox, Rev. F. B., B.A. .. .. Darrang.
Cosserat, Rev. N. W. P., B.A... .. .. .. Lakhimpur.
Dickinson, Rev. C. W. .. .. Silchar.

Bihar and Orissa Ecclesiastical Department.

Drawbridge, Rev. W. H., M. A. .. .. .. Senior Chaplain, Cuttack.

JUNIOR CHAPLAINS.

Newton, Rev. R.P., M.A. .. .. Dinapore and Bankipore.
Perfect, Rev. Henry .. .. Bhagalpur.
Green, Canon Arthur Daniel .. .. Monghyr and Jamalpur.
Simmons, William John, B.A... .. .. .. Muzaffarpur and Darbhanga.
Gee, Rev. Richard, M.A. .. .. Ranchi.
Spooner, Rev. Harold .. .. Services placed at the disposal of the Government of India, Army Dept.

Burma Ecclesiastical Department.

Fyffe, The Right Reverend Rollestone Sterritt, M.A.. Lord Bishop of Rangoon.
Blandford, Ven'ble Henry Weare, B.A. .. .. Archdeacon and Bishop's Commissary. Chaplain, Port Blair, Andaman Islands.

SENIOR CHAPLAINS.

Collins, Rev. James Henry .. .. Dagshai.
Seeley, Rev. George Henry .. .. Maymyo.
Ellaby, Rev. George Alfred, B.A. .. .. .. Rangoon Cantonment.
Price, Rev. Howel Evans .. .. Shwebo; also in charge, Bhamo Chaplaincy.

And 5 Junior Chaplains.

Central Provinces Ecclesiastical Department.

Chatterton, Right Reverend E., D.D. .. .. Lord Bishop of Nagpur. On privilege leave.
Price, Ven'ble C., M.A. .. .. Archdeacon, and Bishop's Commissary Pachmarhi.

SENIOR CHAPLAINS.

Anstey, Rev. H. C. S., M.A. .. .. Mhow.
Clarke, Rev. W. L., M.A. .. .. Kamptee.

And 9 Junior Chaplains.

North-West Frontier Ecclesiastical Department.

SENIOR CHAPLAINS.

Muspratt, Rev. W., M.A. .. .. Hazara.
Rintoul, Rev. C. R., M.A. .. .. Nowshera.
Campbell, Rev. R. W. .. .. Peshawar.

And 2 Junior Chaplains.

Punjab Ecclesiastical Department.

Durrant, Right Reverend H. B., M.A., D.D. .. Lord Bishop of Punjab, Lahore.
Eyme, The Ven'ble James Greensill Skoltowe, M.A. Archdeacon.

SENIOR CHAPLAINS.

Brookes, Rev. Joshua Alfred Rowland, M.A. .. On leave.
Stanley, Rev. Albert Edward, M.A. .. .. .. On leave.
Muspratt, Rev. Walter, M.A. .. .. Hazara.
Stewart, Rev. Charles, B.A. .. .. Hyderabad (Sind).
Hickox, Rev. Sydney Ernest .. .. Sukker. Serving under Government of Bombay.
Foster, Rev. Kenric George .. .. Dalhousie.
Cole, Rev. A. B. Farquharson .. .. .. Rawalpindi.
Parkby, Rev. F. E. .. .. Dalhousie Cantonment.
Thomas, Rev. E. S. .. .. Ferozepore.
Wheeler, Rev. Hugh Trevor .. .. Simla. Officiating Archdeacon of Lahore.
Fagan, Rev. High William Farquharson .. .. Dalhousie.
King, Rev. John Blakeney .. .. Multan.
Buckwell, Rev. F. C. .. .. Simla.
Castle, Rev. W. W. .. .. Lahore.
Stewart, Rev. Charles .. .. Murree.
Stephenson, Rev. H. S. .. .. Bishop's Chaplain, Lahore.
Rintoul, Rev. Charles Randolph .. .. .. Nowshera.
Elwyn Rev. Arthur Lewis Henry .. .. .. On field service.
Campbell, Rev. Rowland William .. .. .. Peshawar.
Maunsell, Rev. A. P. Gabbett .. .. .. On privilege leave.

And 23 Junior Chaplains.

United Provinces Ecclesiastical Department.

Wescott, The Right Reverend George Herbert .. Lord Bishop of Lucknow.
Chapman, The Ven'ble Percy Hugh, M.A., LL.D. .. Archdeacon of Lucknow.
Pearson, H. G., Bar.-at-Law .. .. Registrar of the Diocese of Lucknow. (On leave.)
Langford James, J.W. .. .. Officiating Registrar of the Diocese of Lucknow.

SENIOR CHAPLAINS.

Oldham, Rev. George Ernest, M.A. .. .. .. (On combined leave.)
Janney, Rev. Duncan Arnold .. .. .. Cawnpore.
Menzies, Rev. Henry, M.A. .. .. Lucknow.
Innis, Rev. Richard Duncan .. .. Landaur.
Smith, Rev. H. T. P. .. .. Allahabad Cantonment.
Hill, Rev. William Lachlan, M.A. .. .. .. Services placed at the disposal of the Government of India, Army Department.
Etching, Rev. W. L. W. .. .. Allahabad.
Odgard, Rev. Ralph Gilbert .. .. Ranikhet.
Irvin, Rev. Benjamin Christopher Bultee, M.A. .. Services placed at the disposal of the Government of India, Army Department.

And 15 Junior Chaplains with 7 Additional Clergy.

CHURCH OF SCOTLAND.

Two Junior Chaplains.

THE ROMAN CATHOLIC CHURCH.

With regard to numbers, the *Catholic Directory of India*, 1913, gives the following discrepan tables :—

		Civil Census 1911.	Ecclesiastical Estimate.
British India	Latin rite	1,430,582	1,535,820
	Syriac rite	413,142	364,660
Total, British India and Prot. States		1,843,724	1,900,480
Burma		60,282	88,447
Ceylon		339,300	322,163
Total, India, Burma and Ceylon		2,243,306	2,311,090
French India		....	25,918
Portuguese India		....	296,148
Ecclesiastical Grand Total ..		....	2,663,156*

* After trying to rectify discrepancies the *Directory* fixes as probable the following numbers :—

European and Anglo-Indian Catholics	114,512
Baptised Indian Catholics	2,423,286
Total ..	2,537,798

The Catholic community as thus existing is composed of the following elements :—

(1) The "Syrian" Christians of the Malabar Coast, traditionally said to have been converted by the Apostle St. Thomas. They were brought under allegiance to the Pope by the Portuguese in 1599, and placed first under Jesuit bishops and then under Carmelite Vicars Apostolic. They are at present ruled by four Vicars Apostolic of their own Syriac rite.

(2) Converts of the Portuguese missionaries from 1500 and onwards, starting from Goa and working in the south of the peninsula and up the west coast, Ceylon, Bengal, etc.

(3) European immigrants at all times, including British troops.

(4) Modern converts from Hinduism and Animism in recent mission centres.

The Portuguese mission enterprise starting after 1500, continued for about 200 years, after which it began to decline. To meet this decline fresh missionaries were sent out by the Congregation *de propaganda fide*, till by the middle of the 19th century the whole country was divided out among them except such portions as were occupied by the Goa clergy. Hence arose a conflict of jurisdiction in many parts between the Portuguese clergy of the "padroado" or royal patronage, and the propaganda clergy. This conflict was set at rest by the Concordat of 1886. At the same time the whole country was placed under a regular hierarchy, which after subsequent adjustments now stands as follows:—

Of the **Portuguese Jurisdiction**:—

The archbishopric of Goa (having some extension into British territory) with suffragan bishoprics at Cochin; Mylapore and Damaun (all three covering British territory).

Of the **Propaganda Jurisdiction**:—

The archbishopric of Agra with suffragan bishoprics of Allahabad and Rajputana and the Prefecture Apostolic of Bettiah.

The archbishopric of Bombay, with suffragan bishoprics of Poona, Mangalore and Trichinopoly.

The archbishopric of Calcutta, with suffragan bishoprics of Dacca and Krishnagar, and the Prefecture Apostolic of Assam.

The archbishopric of Madras, with suffragan bishoprics of Hyderabad, Vizagapatam and Nagpur.

The archbishopric of Pondicherry (French) with suffragan bishoprics of Mysore Coimbatore and Kumbakonam.

The archbishopric of Simla with suffragan bishopric of Lahore and the Prefecture Apostolic of Kashmere.

The archbishopric of Colombo (Ceylon) with suffragan bishoprics at Kandy, Galle, Jaffna and Trincomalee.

The archbishopric of Verapoly, with suffragan bishopric of Quilon.

Four Vicariates Apostolic of the Syriac rite for the Syrian Christians of Malabar.

Three Vicariates Apostolic of Burma.

The European clergy engaged in India almost all belong to religious orders, congregations or mission seminaries, and with a few exceptions are either French, Belgian, Dutch, Swiss, Spanish or Italian by nationality. The

number about 1,000 besides which there is a body of secular clergy mostly native to the country, numbering about 2,000 and probably about 2,000 nuns. The first work of the clergy is parochial ministration to existing Christians, including railway people and British troops. Second comes education, which is not confined to their own people; their schools being frequented by large numbers of Hindus, Mahomedans, Parsis, etc. Among the most important institutions are St. Xavier's College, Calcutta, St. Peter's College, Agra, St. Xavier's College, Bombay, St. Joseph's College, Trichinopoly, St. Aloysius College, Mangalore, teaching university courses; besides a large number of high schools and elementary schools. The education of girls is supplied for by numerous convent schools worked by religious congregations of nuns to say nothing of orphanages and other charitable institutions. The total number under education amounted in 1904 to 143,051 boys and 73,164 girls, later figures being unavailable. As to missionary work proper, the country is covered with numerous mission centres, among which those in Chota Nagpur, Gujerati Orissa, the Nizam's Dominions, the Ahmednagar district and the Telugu coasts may be mentioned. (Full particulars on all points will be found in the Catholic Directory already quoted.) The mission work is limited solely by shortage of men and money, which if forthcoming would give the means to an indefinite extension. The resources of the clergy after the ordinary church collections and pay of a few military and railway chaplaincies are derived mainly from Europe, that is, from the collections of *the Society for the Propagation of the Faith* and of *the Holy Childhood*; helped out by private or other donations secured from home by the different local missionaries. In mission work the fathers count as enrolled only those who are baptised and persevering as Christians, and no baptism; except for infants or at point of death, is administered except after careful instruction and probation. This, while keeping down the record, has the advantage of guaranteeing solid results.

THE SCOTTISH CHURCHES.

The Church of Scotland.—The Chaplaincy work of the Church of Scotland dates from 1814, when the Rev. Dr. Bryce landed in Calcutta, and organised a congregation of his Scottish fellow countrymen. Since 1903 there have been eighteen chaplains on the staff, of whom nine belong to the Bengal Presidency, five to Bombay, and four to Madras. These minister both to the Scottish troops and to the civil population of the towns where they are stationed, but when there is a Scottish regiment the chaplain is attached to the regiment, instead of being posted to the station where the regiment happens to be placed and as a rule moves with the regiment. There are three Presidency senior Chaplains in charge of Bengal, Bombay, and Madras respectively. There are churches in the chief towns of the Presidencies, and churches have also been built, or are being built, in all considerable military stations, *e.g.*, Chakrata, Lucknow, Peshawar, Ranikhet, Rawalpindi, Sialkot and Umballa. In addition to the regular establishment there are a number of acting Chaplains sent out by the Colonial Committee of the Church of Scotland, and these are serving in such stations as Rawalpindi, Cawnpore, Meerut, Mhow, and Quetta. The Additional Clergy Societies in India contribute towards the cost of this additional establishment. In other places such as Sialkot, Murree, Dalhousie, Darjeeling and Lahore, regular services are provided by Scottish Missionaries. Simla has a minister of its own sent out from Scotland.

The Mission work of the Church of Scotland dates from 1829, when Alexander Duff, one of the greatest of modern missionaries, was sent to Calcutta. He was the first to open schools where English was made the medium for instruction, and where religious teaching was given daily. Similar educational missions were soon afterwards started in Bombay and Madras. Educational work is still an important branch of the mission work of the Church, but the Bombay College was closed in 1891, and in 1907 the College in Calcutta was united with the College of the United Free Church of Scotland, to form the "Calcutta Christian College." In the Punjab Evangelistic work is being carried on from eight centres under seventeen missionaries. The baptised Christian community now numbers almost 13,000. Work commenced in Darjeeling in 1870 is now carried on throughout the whole Eastern Himalayan district, and there is a Christian community there of over six thousand. In the five mission districts of Calcutta, the Eastern Himalayas, Madras, Poona, and the Punjab there were at the end of 1915 over 21,000 baptised Indian Christians. In connection with these missions the Women's Association of Foreign Missions does invaluable service in school, medical and zenana work, having in India 48 European missionaries, 145 teachers, over 50 schools, three hospitals and six dispensaries.

The Church of Scotland has also done much to provide education for European children in India. Together with the United Free Church St. Andrew's Church provides the governing body of the Bombay Scottish High Schools, which have always held a high place among such institutions, and exercises pastoral supervision over the Bombay Scottish Orphanage. In Bangalore there is the St. Andrew's High School, and both in Bangalore and in Madras the local congregation supports a school for poor children. The now well-known St. Andrew's Colonial Homes at Kalimpong, Bengal, though not directly part of the work of the Church of Scotland, were initiated by and are being locally managed by Missionaries of that Church. The homes exist for the benefit of the domiciled European Community, and are doing magnificent work. There are now fifteen cottages, and 437 children in residence. Further information may be found in "Reports of the Schemes of the Church of Scotland," Blackwood & Sons; "The

Church of Scotland Year Book" and "The Handbook of the Church of Scotland in India and Ceylon."

The United Free Church of Scotland.—This branch of the Scottish Church has only three purely European congregations in India, two in Calcutta, Wellesley Square, and Howrah and one in Bombay, Waudby Road. In Calcutta the Howrah Church is in the district of the mills, and every effort is made to minister to the Scottish Engineers and other workers in the mills. As noted above members of these congregations co-operate with the Established Church of Scotland in providing education for European children.

The Mission work of the Church is extended and varied. It is carried on in seven centres—in Bengal; in Santalia, with five stations; in Western India, including Bombay, Bombay District and Poona; in Hyderabad State including Jalna and Bethel; in Madras, with four stations; in the Central Provinces, including Nagpur, Nagpur District, Bhandara, Wardha and Amraoti; and in Rajputana where since 1,860 missions have been established in eleven districts.

There are at work in these centres 212 Scotch missionaries, together with a native staff of 311. Of organised Indian congregations there are 41, comprising 4,813 communicant members and representing a Christian community of 13,749. Of schools there are 336 with 815 teachers and 14,494 scholars. A large part of this work is organised and supported by the women of the Church who have sent out as many as 81 of these missionaries. In connection with the medical work of the mission there are 19 hospitals where in the year 480,090 out-patients and 8,435 in-patients are treated, all of whom are brought under Christian instruction. There are four great missionary Colleges. There is the Madras Christian College, with 839 students, which reached its great success under the wise leadership of the Rev. Dr. William Miller, and which is now contributed to by five other Missionary Societies as well as that of the United Free Church. Representatives of these Missions, which include the C. M. S. and the Wesleyan Missionary Society, sit upon the College Board. There is the Scottish Churches College in Calcutta, with over 1,152 students; the Hislop College at Nagpur with 505 students; and the Wilson College in Bombay with 1,047 students.

BAPTIST SOCIETIES.

THE BAPTIST MISSIONARY SOCIETY OF GREAT BRITAIN.—Formed in 1792, largely through the efforts of Dr. Wm. Carey, operates mainly in Bengal, Bihar, the United Provinces, the Punjab, and Ceylon. The Baptist Zenana Mission has recently been united with this Society. The staff of the united Mission numbers 255 missionaries and about 1,000 Indian workers. Connected with the Society are 224 Indian Churches, 287 Day Schools, 19 Middle and High Schools, and 4 Theological Training Colleges. The Church membership at the close of 1917 stood at 14,036 and the Christian Community at 37,192. In the methods of the Society, the chief place is given to Bazaar and Village preaching. Increase in membership during the past ten years, about 50 per cent. and in the community 45 per cent. for the same period. Amongst the non-caste people great progress has been made in recent years, and Churches formed from amongst these peoples are self-supporting.

Special work amongst students is carried on in Calcutta, Dacca, Bankipore, Cuttack and Delhi, where Hostels have been erected for the prosecution of this form of work.

EDUCATIONAL WORK.—Ranges from Primary School to Colleges. Serampore College, the only College in India able to bestow a theological degree granted under Royal Charter by His Danish Majesty in 1827, and confirmed by the British Government in the Treaty of purchase of the Settlement of Serampore in 1845, and placed in 1856 by the College Council at the disposal of the Baptist Missionary Society to become a part of its Missionary Educational operations, Arts and Theological. It was affiliated in 1857 to the newly-formed Calcutta University; reorganised in 1910 on the lines of its original foundation with the appointment of a qualified Theological Staff on an Interdenominational basis for the granting of Theological Degrees to qualified students of all Churches.

As the only College in India granting a Theological Degree a large number of students are now resident in the splendid College Buildings. In Arts, the College prepares for the Calcutta Arts Examinations. *Principal* : Rev. G. Howells, M.A., B.D., B.LITT., PH. D.

A Vernacular Theological Institute, and High School likewise attaches to Serampore as also at Delhi and Cuttack, for the training of native preachers.

There are 9 or 10 purely English Baptist Churches connected with the Society, but English services are carried on in many of the stations where an European population obtains. Medical work connected with the Society reported 5 Hospitals, 8 Dispensaries, and about 38,000 out-patients for the year 1917. Two large Printing Presses for both English and Vernacular work are conducted at Calcutta and Cuttack. The Officiating Secretary of the Mission is the Rev. T. W. Norledge, 48, Ripon Street, Calcutta.

WOMEN'S MISSIONARY ASSOCIATION, B.M.S.—Extends over the same area practically as the above; there are 70 missionaries, 395 Indian Workers, 102 Girls' Day Schools, and 5 Girls' Boarding Schools in connection with this work. 751 villages are visited annually by Teachers and Missionaries engaged in Gospel work. A large place is given to medical work, 3 Hospitals with qualified staffs and 11 Dispensaries providing for 1,300 in-patients, and the attendances of out-patients totalling about 48,000 during the past year. The Indian General Secretary of the Women's Missionary Association of the Baptist Missionary Society is Miss Angus, 44, Lower Circular Road, Calcutta.

THE CANADIAN BAPTIST MISSION.—Was commenced in 1873, and is located in the Eastern Telugu District to the north of Madras, in the Kistna, Godavari, Vizagapatam, and Ganjam Districts. There are 22 stations and 180 outstations with a staff of 90 missionaries, including 7 qualified physicians, and 654 Indian workers, with Gospel preaching in villages. Organised Churches number 70, communicants 10,113 and adherents 16,027 for the past year. Twelve Churches are entirely self-supporting. In the Educational department are 263 village Day Schools, with 7,690 children, 10 Boarding schools, 2 High schools, a Normal Training school, a Theological Seminary providing in all for 825 pupils, and an Industrial school. There are 6 Hospitals and two leper asylums. The Mission publishes a Telugu newspaper. Village Evangelisation is the Central feature of the Mission, and stress is laid upon the work amongst women and children in particular. During the last decade membership has increased by 68 per cent., the Christian Community by 50 per cent., and scholars by 500 per cent. The Indian Secretary is the Rev. A. A. Scott, Tuni, Godavari District.

THE AMERICAN BAPTIST TELUGU MISSION.—Was commenced in the year 1836, and covers large parts of Nellore, Guntur, Kistna, and Kurnool Districts, and parts of the Deccan. Its main work is evangelism, but there is large Educational and Medical work in addition. There is an English Church in Madras. A large industrial Yerukala settlement is carried on at Kávali under the charge of one of the missionaries. Organized Telugu Churches, number 176, with 72,178 baptised communicants. There has been a net increase of 1,000 per annum for the past twenty years. There are 108 missionaries and 2,051 Indian Workers. There is a large Theological Seminary at Ramapatnam for the training of Indian preachers and a Bible School at Vinukonda for training Bible Women. An ordinary educational work 848 primary Schools, 26 Boarding Schools, 4 High Schools, Training Schools and 1 Theological Seminary give training to 24,362. In Medical work 6 Hospitals report 2.187 in-patients and 19,583 out-patients for the year.

Secretary: A. M. Boggs, Narasaravupet, Guntur District.

AMERICAN BAPTIST FOREIGN MISSION SOCIETY, organized in 1814, has Missions in Burma began 1814; Assam 1836; Bengal and Orissa 1836; South India 1840. It owes its rise to the celebrated Adoniram Judson. Until 1910 the Society was known as the American Baptist Missionary Union. There are 31 main stations in Burma, 13 in Assam, 9 in Bengal and Orissa, and 1 in South India, besides hundreds of outstations. All forms of missionary enterprise come within the scope of the Society.

The missionary staff numbers 398 in all, with an Indian workers' staff of 4,834. Communicants number 155,063. Organized churches number 1,359 of which 860 are self-supporting. Educational work is conducted on a large scale, the total number of schools of all grades being 1,952 with over 65,000 pupils. The Christian College has 74 students in college classes. There are ten High Schools with 3,562 pupils.

Medical work embraces 13 Hospitals and 35 Dispensaries, in which 78,020 out-patients and 1,832 in-patients were treated last year.

Indian Christians contribute annually more than Rs. 1,40,000 for religious and benevolent work within the Mission.

The great work of the Mission continues to be evangelistic and the training of the native preachers and Bible-women, and extends to many races and languages, the most important of which, in Burma, has been the practical transformation of the Karens, whose language has been reduced to writing by the Mission. The work in Assam embraces 9 different languages, and large efforts are made amongst the employers on the tea plantations. The Mission Press at Rangoon is the largest and finest in Burma.

Assam Secretary, F. W. Harding, Tura, Assam.

Burma Secretary, Rev. H. J. Marshall, Tharrawaddy, Burma.

Bengal and Orissa Secretary, Rev. Howard R. Murphy, M.D., Midnapore, Bengal.

South India (or Telugu) Secretary, Rev. W. A. Stanton, D.D., Kurnool, Kurnool District, S. India.

THE TASMANIAN BAPTIST MISSION.—With 3 missionaries, is established at Siragunge, E. Bengal.

Secretary: Rev. E. T. Thompson, Mission House, Siragunge.

THE AUSTRALIAN BOARD OF BAPTIST FOREIGN MISSIONS.—Embracing the societies representing the Baptists of the States of the Australian Commonwealth. The field of operations is in East Bengal. The staff numbers 38 Australian workers. There are 1,515 communicants and a Christian community of 3,447.

Secretary Field Council: Rev. Hedley Sutton, M.A., Mission House, Mymensingh.

THE STRICT BAPTIST MISSION.—Has 10 Missionaries, and 86 Indian Workers in Madras, W. and the Salem District. Communicants number 160; organised Churches 4; Elementary schools 30, with 1,500 pupils.

Secretary: Rev. E. A. Booth, Kilpauk, Madras, W.

AMERICAN BAPTIST, BENGAL-ORISSA MISSION commenced in 1836. Area of operation, Midnapore and Balasore districts of Lower Bengal. Mission staff 29, Indian workers 264. One English Church and 24 Vernacular Churches, Christian Community 5,000. One hospital and two dispensaries. Educational: One Theological and one High School, and 150 Elementary schools, pupils 4,880. Two Industrial schools for weaving and carpentering, &c. The Vernacular Press of this mission printed the first literature in the Santali language.

Secretary: Rev. Howard R. Murphy, M.D., Midnapore.

PRESBYTERIAN SOCIETIES.

THE IRISH PRESBYTERIAN CHURCH MISSION.—Operates in Gujerat and Kathiawar with a staff of 32 Missionaries of whom 2 are qualified doctors and an Indian staff of 551 including school teachers. There are 10 Organised Churches, a communicant roll of 1,578, and a Christian community of 6,408. In Medical work there are 2 Hospitals, 5 Dispensaries, with 883 in-patients and 16,774 out-patients. The Mission conducts 3 High schools, 2 Anglo-Vernacular schools, and 141 vernacular schools affording tuition for 6,296 pupils, 4 Orphanages, a Divinity College at Ahmedabad, a Teachers' Training College for men, a Teachers' Training College for women, both at Ahmedabad, and a Mission Press at Surat. The Mission has made a speciality of farm colonies, of which there are about a score in connection with it, most of them thriving.

The Jungle Tribes Mission with 4 missionaries is a branch of the activities of the above, working in the Panch Mahals and Rewa Kantha districts, with farm colonies attached.

Secretary: Rev. S. Gillespie, B.A., Mission House, Ahmedabad City.

THE UNITED PRESBYTERIAN CHURCH OF NORTH AMERICA. The Sialkot Mission of the above Church was opened at Sialkot, Punjab, in 1855. It is now carrying on work in seven districts of the province. Its missionaries number 86, and its Indian workers 754. Its educational work comprises one Theological Seminary, one College, four High Schools, one Industrial School, eight Middle Schools, and 195 Primary Schools. The total enrolment in all schools was 12,774 in 1917. The Mission is also carrying on Medical work through four hospitals and eight dispensaries.

Secretary: Rev. J. A. McConnelee, D. D., Gujranwala, Punjab.

THE AMERICAN PRESBYTERIAN MISSION operates in 3 main sections known as the Punjab, North India and Western India Missions. The American Staff numbers 207 and Indian Staff 1,340. There are 30 main stations and 186 out-stations. Organized churches number 61, 17 of which are self-supporting. There are 10,558 communicants and a total baptized community of 66,838. Educational work as follows: 3 Christian Colleges, and an interest in two other Colleges for women; students 1,432; Theological Schools 2, students 47; Training Schools for village workers 2, students 121, High Schools 15, pupils 1,126, Industrial Schools 6, pupils about 150; Agricultural Demonstration Farms 4, students about 130; Teachers' Training Departments 8, students about 100; Medical students at Miraj 62, Elementary Schools 252; Schools of all grades 296; pupils 13,036. Medical Work: Hospitals 6; Dispensaries 13; in-patients 4,752; out-patient visits 105,421. Sunday Schools 397 with 14,952 pupils. Contributions for Church and Evangelistic work on the part of the Indian Church Rs. 26,472. Total Indian contributions for all purposes, including educational and medical fees and grants Rs. 4,33,319.

The Hospital at Miraj, under the care of Dr. W. J. Wanless and Dr. C. E. Vail is well known throughout the whole of S. W. India, and the Forman Christian College at Lahore under the principalship of Rev. J. C. R. Ewing, D.D. C.I.E., is equally well-known and valued in the Punjab. The Allahabad Christian College (D. C. A. R. Janvier, Principal) is growing rapidly and its agricultural department has become increasingly prominent. Woodstock College for Women at Mussoorie, Principal Rev. E. F. Fife, D. D., is one of the largest and most valuable institutions of this description in Northern India.

Secretary of Council of A.P. Missions in India: Rev. H. D. Griswold, Ph. D., D.D., Saharanpur.

Secretary, Punjab Mission: Rev. F. J. Newton, Moga.

Secretary, North India Mission: Rev. R. C. Smith, Fatehpur, Haswa.

Secretary, Western India Mission: Rev. I. K. Wright, B.A., Vengurla.

THE NEW ZEALAND PRESBYTERIAN MISSION—Commenced as recently as 1910 at Jagadhri, Punjab.

Secretary: Miss A. E. Henderson, Jagadhri.

THE CANADIAN PRESBYTERIAN MISSION.—Commenced in 1877, has 14 main Stations in the Indore, Gwalior, Rutlam, Dhar, Alirajpur, Jaora, Sitamau, Banswara, &c. Native States. The Mission staff numbers 75, Indian workers 280, Organized Churches 13, Communicants (September 30, 1916) 1,138, Baptised non-communicants 2,287, Unbaptised infants and catechumens 193. Total Christian Community 3,618; Educational work comprises Elementary and Middle Schools, High Schools for boys and girls, College, Theological Seminary and Classes. Industrial teaching and work are done in three Girls' Orphanages in the Women's Industrial Home, and at Rasulpura which last includes the Mission Press and the School for the Blind. The Medical work is large, chiefly among women.

Secretary: Rev. J. Fraser Campbell, D.D. Rutlam, C. I.

THE GERMAN EVANGELICAL SYNOD of NORTH AMERICA.—Commenced work in the C. in 1865. The mission staff numbers 23; Indian Christian workers 310; Communicants 1,81 total Christian community 4,008; Organis Churches 6; one Theological school with students; one High School with 90 studen and 64 other schools with 3,956 students. T mission has 2 Hospitals and 6 Dispensari which in 1914 treated 18,013 patients.

Secretary: Rev. F. A. Goetsch, Bisrampur.

THE WELSH CALVINISTIC METHODIST MISSI (OR WELSH PRESBYTERIAN MISSION) est blished in 1840 with a staff of 32 Missio aries, 600 Native workers, occupies statio in Assam in the Khassia and Jaintia Hills, t Lushai Hills and at Sylhet and Cachar. T Khassia language has been reduced to writin the Bible translated, and many books pu lished in that language by the Mission. Co municants number 14,000, the total Christi community 42,000; organised Churches 45 self-supporting Churches 30. Elementa schools number 510, scholars 15,000; Boardi

schools 3, scholars 820, in addition to 1 Industrial school, 4 Training institutions and 1 Theological Seminary. Two Hospitals and 3 Dispensaries provided for 10,000 patients in 1914.

Secretary: Rev. J. Ceredig Evans, Shillong.

THE ARCOT MISSION of the Reformed Church in America (Dutch), organised in 1853 occupies the Arcot and Chittoor districts in S. India with a staff of 29 Missionaries, and 504 Indian ministers and workers. Churches number 19, Communicants 3,936, total Christian community 11,298; Boarding schools 11, scholars 528; Theological school 1, students 37; High schools 4, scholars 1,219; Training schools 2, students 44; Industrial schools 2, pupils 95; Elementary schools 181, scholars 6,945. Three Hospitals, 7 Dispensaries with staff of 38, provided for 2,217 in-patients and 82,052 out-patients for the past year.

Secretary: Rev. H. J. Scudder, M.A., & B.D., Punganur, S. India.

CONGREGATIONAL SOCIETIES.

THE AMERICAN BOARD OF COMMISSIONERS FOR FOREIGN MISSIONS.—Has two large Missions, the American Marathi Mission, and the Madura Mission. The Marathi Mission includes a large part of the Bombay Presidency, with centres at Bombay, Ahmednagar, Satara and Sholapur, and was commenced in 1813, the first American Mission in India. Its activities are large and varied. The staff at the beginning of 1918 consisted of 45 missionaries and 720 Indian workers operating in 152 outstations exclusive of Bombay City. Organised Churches number 66 with 8,592 communicants, and 6,984 adherents. There is a Leper work at Sholapur. The Educational work embraces 17 training and secondary schools, with 765 pupils and 179 primary schools, with 6,862 pupils, three-fifths of whom are non-Christians. A large Theological Seminary at Ahmednagar trains for the Indian Ministry. Zenana work and Industrial work are vigorously carried on, the latter embracing carpentry, metal hammering, lace work, carpet weaving and extensive work on an improved hand loom. A school for the blind is conducted on both Educational and Industrial lines. 51,973 patients were treated in the Hospitals and Dispensaries of the Mission last year. The Mission has for 70 years published the "Dnyanodaya," the only combined English and Marathi Christian weekly newspaper. Special evangelistic work is carried on amongst the tribes known as the Bhills and Mangs. This Mission was the first to translate the Christian Scriptures into the Marathi tongue.

THE MADURA MISSION.—In the S. Madras District, commenced in 1834, has a staff of 49 missionaries and 897 Indian workers, operates in the Madura and Ramnad districts and has a communicant roll of 9,350 with 27,210 adherents and 33 organised churches, many of which are entirely self-supporting and self-governing. Schools number 240 with 13,491 pupils. There is a Christian College at Madura, as also Hospitals for men and women; at Pasumalai are a High School, Theological Institution, Industrial School, Teachers' Training School and Printing Press. The Secretary of the Marathi Mission is the Rev. A. H. Clark, Ahmednagar; and of the Madura Mission, the Rev. C. S. Vanghan, Manamadura.

The Arcot Mission commenced under the American Board was transferred to the Reformed Church of America in 1851.

THE SCANDINAVIAN ALLIANCE MISSION OF NORTH AMERICA.—Embraces two Branches, one in Bengal and the other in Khandesh. The total mission staff is represented by 10 missionaries and 27 Indian workers. There are 62 communicants and a Christian community of 158. Ten Elementary Schools provide for 160 pupils.

Secretaries: Rev. O. A. Dahlgren, Navapur, Khandesh, and Miss H. Abrahamson, Domar, Bengal. The Branch in Khandesh co-operates with the Swedish Alliance Mission, and both missions having a united yearly conference.

THE SWEDISH ALLIANCE MISSION.—Working among the Bhils in West Khandesh has 15 missionaries and 26 Indian workers. There are 5 congregations with a total membership of 470, of whom 220 are communicants. There are 5 Elementary Schools, 2 Boarding Schools and one Industrial School. The pupils are 90.

Secretary: Rev. Enok Hedberg, Nandurbar West Khandesh.

THE SCANDINAVIAN ALLIANCE MISSION, HIMALAYAS.—(Finnish Branch). The total mission staff is represented by nine missionaries and six native workers. There are about 80 Communicants, five churches and a Christian community of about 100. One Orphanage with 23 orphans, one Kindergarten school, one Upper Primary school and three Day schools with about 70 pupils. *Acting Secretary*: Miss Klara Hertz, Lachen, *via* Gangtok, Sikkim.

THE LONDON MISSIONARY SOCIETY.—Commenced work in India in 1798 and occupies 10 centres in N. India, 12 in S. India and 7 in Travancore. The Mission engages in every form of Missionary activity. The European staff numbers 223, Indian workers 2,004; Organised Churches 490; Communicants 13,748 and Christian community 116,575. There are 4 Christian Colleges, students 159; 3 Theological Institutions, students 41; 4 Training Institutions, pupils 114; 22 High schools, pupils 4,849; 25 Boarding schools, scholars 1,167; 9 Industrial schools, pupils 116 and 862 Elementary schools with 36,775 scholars. In Medical work Hospitals number 15, Dispensaries 15, qualified doctors 10, and 3,997 in-patients and 130,220 out-patients for the year.

The main centres of the Mission in N. India are at Calcutta, Benares and Almora. The Bhowanipur Institution at Calcutta is now a Teacher Training College, Evangelistic work is carried on amongst the thousands of pilgrims visiting Benares, and Almora is noted for its

Hospital and Leper Asylum. Special efforts are made amongst the Nama Sudras and the aboriginal tribes known as the Majhwars, Cheros and Pankas. The S. India district is divided into the Kanarese, Telugu and Tamil areas, with 12 stations and 472 outstations. At Nagercoil, (Travancore) is the Scott Memorial College with 985 students, a Church and congregation said to be the largest in India, and a large Printing Press, the centre of the S. Travancore Tract Society.

N. India Secretary: Rev. J. H. Brown, B.A., B.D., Calcutta.

S. India Secretary: Rev. E. P. Rice, B.A., Bangalore.

ALL-INDIA MISSIONS.

THE CHRISTIAN AND MISSIONARY ALLIANCE—Dates from the year 1893 under the name of the International Missionary Alliance, but a number of its missionaries were at work in Berar Province much earlier. The work is confined to the provinces of Berar, Khandesh and Gujerat. There is a staff of 72 missionaries and 132 Indian workers. The number of Mission stations is 19, with additional outstations. There is a Christian community of 2,870 people. There are 4 orphanages, 2 for boys and 2 for girls: 3 training schools for Indian workers, and 1 English congregation at Bhusawal. *Secretaries:* for Gujarat: Rev. J. N. Culver, Viramgam, Gujarat; for Berar and Khandesh: Rev. S. H. Auernheimer, Malkapur, Berar.

THE CHURCH OF THE BRETHREN (AMERICAN)—Opened work in 1895, and operates in the Southern part of Gujerat, Khandesh, and Thana Districts. Its staff numbers 29 including missionaries' wives, and 105 Indian workers. The baptised (immersed) membership stands at 1,125; education is carried on in 2 Girls' Boarding schools, 4 Boarding schools for boys, and 81 Village Day schools. Industrial work is connected with four of the schools, and a Farm Colony is established at Umballa.

THE POONA AND INDIAN VILLAGE MISSION—Founded in 1893 operates in the Poona, Satara and Sholapur Districts, with 23 European and 32 Indian workers. The number of Indian Christians is 45. The main work is evangelism of the villages, with Women's Zenana work, and Village schools. There are 4 Village Dispensaries, including a hospital and a large medical work in the great pilgrimage city of Pandharpur, and a hospital at the head-quarters of the Mission, Nasrapur, in the Bhor State. *Secretary:* Mr. J. W. Stothard, Nasrapur, Poona District.

THE AMERICAN CHURCHES OF GOD MISSION—Has two missionaries at Bogra, Bengal.

THE INDIAN CHRISTIAN MISSION—Founded in 1895, has 31 Organised Churches, 11 Missionaries, 24 stations, 41 out-stations, 1,392 Communicants, and 28 Primary schools in the Ellore district, S. India, stations also in Berenag, Kumaon, N. India, and Nuwara Eliya, Ceylon. *Secretary:* A. S. Paynter, Nuwara Eliya, Ceylon.

There are 3 PENTECOSTAL MISSIONS at work. The Pentecostal Mission in W. Khandesh and Thana Districts; the Pentecostal Church of the Nazarine Mission at Buldana, Berar, and the Pentecost Bands of the World Mission with a Boys' Orphanage at Dondi Lohara, C. P., a Girls' Orphanage at Raj Nandgaon, and a Leper Home at Raj Nandgaon. The staff consists of 14 missionaries and 28 native preachers and Bible women.

THE SANARPUR AND LOHAGHAT DISTRICT BIBLE AND MEDICAL MISSION—Was established at Lohaghat, 48 miles from Almora, in 1910. Amongst the faith missions are the Vanguard Mission at Sanjan, Thana District, with 6 Missionaries; and the Church of God Mission with 7 Missionaries at Lahore. The Burning Bush Mission has a staff of 8 Missionaries at Allahabad. The Tehri Border Village Mission is the only Christian enterprise in the Himalayan Native State of that name, its agents are stationed at Landour, and have translated portions of the New Testament into the Tehri-Garhwali language. *Secretary:* Miss A. N. Budden.

THE HEPHZIBAH FAITH MISSIONARY ASSOCIATION has six missionaries. *Agent:* D. W. Zook, Adra, B. N. Ry.

THE TIBETAN MISSION—Has 5 Missionaries with headquarters at Darjeeling, and Tibet as its objective. *Secretary*: Miss J. Ferguson, Darjeeling.

THE INDIAN MISSIONARY SOCIETY OF TINNEVELLY (DORNAKAL MISSION)—Opened in 1904, operates in the Warangal District of the Nizam's Dominions. It is the missionary effort of the Tamil Christians of Tinnevelly. There are now 2,406 Christians in 69 villages. *Secretary*: Mr. J. Anbudaiyan, B.A., L.T., Palamcottah.

THE MISSION TO LEPERS—Founded in 1874, is an interdenominational and international Society for the establishment and maintenance of Asylums for Lepers and Homes for their untainted children, working largely in India, China, and Japan. Its work in India is carried on through co-operation with 29 Missionary Societies. The Mission now has 39 Asylums of its own with over 4,223 inmates, and is aiding or has some connection with work for lepers at 21 other places in India. In the Mission's own and aided Asylums there are about 3,100 Christians. The total number of lepers reached by the Mission in India is about 5,000.

An important feature of the work of the Mission is the segregation of the untainted or healthy children of lepers from their diseased parents. 550 children are thus being segregated and saved from becoming lepers.

The Mission very largely relies on voluntary contributions for its support. *Patroness:* The Dowager Duchess of Dufferin and Ava. *President:* The Primate of Ireland. Head Office, 28, North Bridge, Edinburgh. Mr. Wellesley C. Bailey, General Superintendent. *General Secretary:* Mr. W. H. P. Anderson, 20, Lincoln. *Secretary for India*: The Rev. Frank Oldrieve, Comely Bank, Simla. (Communications and subscriptions may be sent to Mr. T. Dobson, Scottish Mission Industries, Poona).

THE REGIONS BEYOND MISSIONARY UNION.—An interdenominational Society commenced work at Motihari, Behar, in 1900, and now occupies 4 stations and 7 outstations in the Champaran and Saran Districts, with a staff of 13 Europeans, and 34 Indian workers There are 21 Elementary schools, with 517 pupils, a Girls' and a Boys' Orphanage and Boarding school, communicants number 50.

THE NATIONAL MISSIONARY SOCIETY OF INDIA —Established 1905, it has a staff of 18 Indian Missionaries and 21 helpers operates in Montgomery District (the Punjab), Nukkar Thasil (U. P.), North Kanara (Bombay), Karjat-Karmala Talukas (Bombay), Omalur (Madras) and Bhagalkund Agency (C.I.). Christian community 2,000. Twelve schools. Two Dispensaries, Organ: *The National Missionary Intelligencer* (a monthly journal in English sold at 8 as. per year post free).

General Secretaries: Mr. K. T. Paul, B.A., Calcutta and Mr. P. O. Philip, B.A., N. M. S. Office, Vepery, Madras.

THE SEVENTH DAY ADVENTISTS.—Established in India in 1895. Work carried on in English, Hindi, Urdu, Bengali, Santali, Tamil, Telugu, Malayalam, Marathi, Gujerati, Burmese and Karen; including schools, dispensaries and evangelical stations. *President:* W. W. Fletcher, 17, Abbott Road, Lucknow; *Treasurer:* A. H. Williams; *Secretary:* R. D. Brisbin.

THE AMERICAN MENNONITE MISSION.—Established 1899, works in the C. Provinces. Mission staff numbers 20, Indian workers 80, Church members 581, 1 Industrial Training Institution, 1 High School, 1 Bible School, 2 Orphanages, 1 Widows' Home, 1 Leper Asylum; Elementary Schools, 8; Dispensaries, 3; Hospital, 1. *Superintendent:* Rev. P. A. Friesen, P. O. Jamgaon, *via* Drug, C. P.

THE MENNONITE MISSION GENERAL CONFERENCE—Started in 1901 in the C. Provinces. Workers number 11; Leper, Medical, Orphan and village work carried on. From the Leper Asylum 230 have been baptised. *Secretary:* Rev. P. W. Penner, Jangir, C.P.

THE KURKU AND CENTRAL INDIA HILL MISSION—Established 1890 in the C. P. and Berar, has a mission staff of 14, Indian workers 20; Churches 6, Communicants 105; Christian community 209; 2 Boarding and 5 Elementary schools, with 74 pupils. *Secretary:* Rev. Carl Wydner, Ellichpur, Berar.

THE CEYLON AND INDIA GENERAL MISSION—Established 1893, occupies stations in India in the Coimbatore and Anantapur Districts. Mission staff 23; Indian workers 70; Churches 10, with Communicants 256, and Christian community 756; Orphanages 3; Elementary schools 27; pupils 641.

Secretary: Pastor W. Mallis, Coonoor, Nilgiris.

THE BOYS' CHRISTIAN HOME MISSION—Owes its existence to a period of famine, was commenced in 1889. Mission staff 11, Indian workers 22. There are elementary schools with 2 children, two orphanages and a Widows' Home, where Industrial training is given. There are three Mission Stations—At Dhond, and at Sahraich, and Benares in United Provinces. *Director:* Rev. Albert Norton, Dhond, Poona District.

Ladies' Societies.

ZENANA BIBLE AND MEDICAL MISSION.—This is an interdenominational society, with headquarters 33 Surrey Street, London, working among women and girls in seven stations in the Bombay Presidency, fourteen in United Provinces, and five in the Punjab. There are 76 European Missionary ladies on the staff and 28 Assistant Missionaries, 151 Indian workers, teachers and nurses and 140 Bible women. During 1917 there were 1,453 in-patients in the five hospitals supported by the Society (Nasik, Benares, Jaunpur, Lucknow and Patna), but the Victoria Hospital, Benares, was practically closed in 1917. There were 18,208 out-patients 75,395 attendances at the Dispensaries In their 44 schools were 3,700 pupils, and there is a University Department at Lahore. The evangelistic side of the work is largely done by house to house visitations and teaching the women in Zenanas; 3,189 women in 2,778 houses were so taught. The 140 Bible women visited 542 villages; the number of houses was 1,230.

THE LUDHIANA ZENANA AND MEDICAL MISSION has removed its headquarters to Lahore leaving one Bible woman working in the city of Ludhiana. Four missionaries are in Lahore and work is being carried on in the Lahore District in connection with the American Presbyterian Mission.

THE MISSIONARY SETTLEMENT FOR UNIVERSITY WOMEN was founded in Bombay in 1895 to reach the higher class of Indian ladies, its activities now include a hostel for women students, in addition to educational, social, and evangelistic work. *Warden*, Miss Dobson, Girgaum, Bombay.

THE MUKTI MISSION, the well-known work of Pandita Ramabai, enables upwards of 350 widows, deserted wives and orphans to earn a comfortable living by means of industrial work organised by the Pandita, supported by a good staff of Indian helpers. A large staff of European Missionary Ladies do evangelistic work in the surrounding Kedgaon, Poona District.

Disciple Societies.

The India Mission of the Disciples of Christ (Foreign Christian Missionary Society of Cincinnati, Ohio, and Christian Women's Board of Missions of Indianopolis combined) commenced work in 1882; its area Central and United Provinces; number of Indianopolis Churches 14, and immersed communicants 1,575. Its staff, including Missionaries' wives, 67; Asst. missionaries 3, and Indian Worker's staff 313. There are 7 Hospitals, 13 Dispensaries, with 97,020 in-patients and out-patients for the past year. Two Orphanages and an Industrial Home show 536 inmates. Two leper asylums with 108 inmates. In connection with the industrial work a farm of 400 acres has been taken at Damoh. There are 8 Middle schools, 31 Primary schools with 2,982 scholars; 2 Boarding schools, with 300 students. An active zenana work is carried on, and there is a home for women and children.

The Australian branch has three Mission stations in Poona District. The Great Britain and Ireland branch has two mission stations

one in Mirzapur District, U. P., and one in Palamau District, Orissa. These have no organic connection with the India Mission of the Disciples of Christ.

Secretary: Rev. W. B. Alexander, Jubbulpore, C.P.

Undenominational Missions.

THE CENTRAL ASIAN MISSION, with a Church, Dispensary and School is found on the N.-W. Frontier, conducted on the lines of the China Inland Mission, and has Kafristan as its objective.

The Friends' Foreign Missionary Association with Headquarters at Hoshangabad, Central Provinces, commenced in 1874. Work has recently been opened up in the Gwalior and Bhopal States. There are 6 Churches, 24 Missionaries, 197 members, Orphanages for Boys and Girls, 1 Anglo-Vernacular school, 15 Day Schools, one High School and one Zenana Hospital with a general dispensary connected with the Mission, in addition to a self-supporting weaving community at Itarsi, and Industrial Works and a Farm Colony near Hoshangabad. *Secretary*: Mr. B. H. Backhouse, Hoshangabad, C. P.

The American Friends' Mission with 5 Missionaries is working at Nowgong. *Secretary:* Miss D. Fistler, Nowgong, C. I.

The Old Church Hebrew Mission was established in 1858, in Calcutta, and is said to be the only Hebrew Christian Agency in India. *Secretary*: J. W. Pringle, Esq., Calcutta.

THE OPEN BRETHREN—Occupy 46 stations in the U. Provinces, Bengal, S. Mahratta, Godaveri Delta, Kanarese, Tinnevelly, Malabar Coast, Coimbatore and Nilgiri Districts. They hold an annual Conference at Bangalore.

Lutheran Societies.

THE AMERICAN EVANGELICAN LUTHERAN MISSION. General Council, founded in 1844 for the Godaveri and Kistna Districts, has its Headquarters at Rajahmundry. Its staff consists of 27, including Missionaries' wives and Lady Doctors, with 484 Indian Workers. The membership is 23,620. There are Boys' and Girls' Central Schools, Mission Press, a well-equipped hospital aud Book Depot at Rajahmundry, and a High School at Peddapur. *Chairman:* The Rev. C. F. Kuder, M.A., Rajahmundry.

The 'General Synod' Section of the above, has its headquarters in Guntur, founded in 1842. Its Christian community numbers 46,594, with 16,242 communicants, 27 missionaries inclusive of wives, and 815 Indian workers, shewing an increase of 61 per cent. during the past ten years. The following institutions are connected with the Mission, a second grade College, High school for Girls, Hospital for women and children, Normal training School, and Industrial School. *Secretary:* the Rev. Victor McCauley, Guntur.

THE EVANGELICAL NATIONAL MISSIONARY SOCIETY OF SWEDEN, founded in 1856, occupies the districts of Betul, Chindwara and Saugor in the Central Provinces. There are 1,826 Church members and 11 Indian Congregations. The staff numbers 281, including women, with an Indian staff of 170. Schools number 42 with 1,677 children. Only two of the schools are Secondary, all the rest are Primary Schools. There are small dispensaries at most of the stations. There are three Christian Colonies, 1 Workshop with an aided Carpentry School, 1 Female Industrial School, 1 Widows' Home, 5 Orphanage and Boarding Schools for Christian children. *Secretary:* Rev. P. E. Froberg, Chhindwara, C. P.

THE BASEL MISSION was commenced in 1834, and occupies 26 main stations and 128 outstations in the Coorg, S. Mahratta, Nilgiris, and N. and S. Canara districts of S. W. India. The total European Staff numbers 41 with 1,110 Indian workers. There are 66 organised Churches, with a membership of 19,762. Educational work embraces 204 schools (including 2 Theological, 9 Boarding and 4 High schools) with 16,970 Elementary and 3,150 Secondary school pupils and 831 scholars in Boarding Institutions and Orphanages. There are good Hospitals at Betgiri and Calicut under European doctors with 3 branch hospitals and 4 Dispensaries connected; 66,804 patients were treated last year. There is a Leper Asylum at Chevayur.

The Industrial work of the Mission is second to none in India and comprises 17 establishments, embracing one mechanical establishment of a first rate order at Mangalore, 2 Mercantile branches, 7 Weaving and 7 Tile work establishments in the Kanara and Malabar districts; employés number 3,633. A large Printing Press at Mangalore issues publication in the Kanarese, Malayalam, Tulu and English languages. Owing to the internment of a number of missionaries belonging to the Basel Mission, it has been impossible to revise the above figures most of which are for 1914. *Secretary*: Rev. B. Luthi, Mangalore.

THE CHURCH OF SWEDEN MISSION—Was founded in 1874. Operated till 1915 in the Madura, Tanjore, Trichinopoly and Ramnad Districts. Since 1015 the Mission having taken full charge of the former Leipzig Evangelical Lutheran Mission field, works also in the Madras, Chingleput, Coimbatore, Salem and S. Arcot Districts with diaspora congregations in Rangoon, Penang and Colombo. European staff numbers 22, Ordained Indian Ministers 36, Indian workers 83, Organised Churches 41, Baptised Membership 20,782. Schools 263, Pupils 12,825 (9,750 boys, 3,079 girls). Teaching staff 655. *Secretary*: Rev. E. Heumann, D. D., Trichinopoly.

THE MISSOURI EVANGELICAL LUTHERAN MISSION—is located in North Arcot, Salem, Tinnevelly and Travancore with a staff of 9 Missionaries. Three Training schools, 144 pupils, and 67 Elementary schools with 2,675 pupils are connected with the Mission. *Secretary*: Rev. Henry Hamann, Ambur, N. Arcot District.

THE DANISH EVANGELICAL LUTHERAN MISSION.—Established 1863 in South Arcot, working there and in North Arcot, on the Shevaroy Hills and in Madras, has a total staff of 44 Missionaries and 211 Indian workers. Commun

cants 904, Christian community 2,210, 1 High School, 2 Boarding Schools, 4 Industrial Schools, Elementary Schools 58, total scholars 3,484; Dispensary patients 21,849.

Chairman: Rev. J. Bittmann, 38, Broadway, Madras.

THE SANTAL MISSION OF THE NORTHERN CHURCHES (formerly known as the India Home Mission to the Santals)—Founded in 1867, works in the Santal Parganas, Goalpara (Assam), Malda and Dinajpur. Work is principally among the Santals. The mission staff numbers 25; Indian workers 342; communicants 3,000; Christian community 20,000; organised churches 36; boarding schools 3; pupils 316; elementary schools 31; pupils 535; industrial school, 1. *Secretary*: Rev. P. O. Bodding, Dumka, Santal Parganas.

MISSIONS AND ENEMY TRADING ACT.—In May 1918, the following notice regarding Missions was published in the "Gazette of India":—"The following missions or religious associations are declared companies under Act 2 (the Enemy Trading Act) of 1916:—The Leipzig Evangelical Lutheran Mission, Madras, the Hermansberg Evangelical Lutheran Mission, Madras, the Schleswig Holstein Evangelical Lutheran Mission, Madras, the Gossner Evangelical Lutheran Mission, of the United Provinces, and Behar and Orissa, the German Evangelical Lutheran Mission of Ranchi, Bihar and Orissa. The Governor-General in Council notifies that the powers conferred under Section 7 of the said Act shall extend to the property, movable and immovable, of these missions or religious associations."

Methodist Societies.

The Methodist Episcopal Church began its Indian Mission in 1857, and with the exception of Assam, and the N. W. Frontier Provinces is now established in all the political Divisions of India. Its number of baptised Christians stands at 266,275, under the supervision of 240 ordained and 900 unordained Ministers. Schools of all grades number 1,569 with 39,087 students, Sunday School scholars stand at 126,000, and young peoples' societies at 604, generally known as Epworth Leagues. Thirty Anglo-Indian Congregations are found in the larger Cities, with one College, 6 High schools, and numerous Middle schools for this class. For Anglo-Vernacular Education the mission has 3 Colleges, 12 High schools and 62 schools of Lower grade. The net increase from the non-Christian races has been at the rate of 15,000 per annum, for the last decade. The Isabella Thoburn Training College at Lucknow is a large Institution. There are large printing presses at Calcutta, Madras and Lucknow.

In Burma there are 9 schools, with 1,484 pupils, a large Boarding and Day school for European girls at Rangoon, a hill station Boarding school for girls at Thandaung, and an Anglo-Indian Church at Rangoon.

While financially supported by the Board of Foreign Missions of the American Methodist Episcopal Church, ecclesiastically the Church in India is independent of foreign control, being under the supervision of its own bishops, *viz.*, *Bishop*, F. W. Warne, Lucknow. *Bishop*, J. E. Robinson, Bangalore, and *Bishop*, J. W. Robinson, Bombay.

The American Wesleyan Church with 5 Missionaries, has in recent years taken over an independent Mission at Pardi and Daman, Gujerat District. *Secretary*: Rev. A. E. Ashton, Pardi.

The Reformed Episcopal Church of American (Methodist) at Lalitpur and Lucknow U. P. has 2 Missionaries, 4 Outstations, 2 Orphanages and a membership of nearly 100.

THE WESLEYAN METHODIST MISSIONARY SOCIETY commenced work in India in 1817 (Ceylon in 1814). The Mission in India is organised into 10 District Synods with 3 Provincial Synods. There is a large English work connected with the Society, 20 ministers giving their whole time to Military work and English churches.

The districts occupied include 64 main stations in Bengal, Madras, Mysore, Bombay Punjab, Central Provinces, Hyderabad (Nizam's Dominions), Trichinopoly and Burma. The European staff numbers 148 with 3,150 Indian workers; Communicants 19,633, and total Christian community 58,253. Organised Churches 93.

Educational work comprises 7 Christian Colleges, students, 3,807; 9 Theological Institutions, pupils, 129; 21 High Schools, pupils, 5,548; 10 Industrial schools, pupils, 602; 1,163 Elementary schools, with 58,460 scholars. In Medical work there are 12 hospitals, 22 dispensaries, 18 qualified doctors, 4,757 in-patients and 285,806 attendances at the dispensaries.

The above particulars are those published for 1915.

Vice-Chairman of General Synod: Rev. D. A. Rees, Bangalore.

The Women's Foreign Missionary Society of the M. E. Mission is divided into 6 Conferences and is co-extensive with the main work of the Mission. 110 Lady Missionaries are engaged in Educational, Zenana, and Evangelistic and Medical work. The Secretary for the Bombay Conference is Miss C. H. Lawson, Talegaon-Dabhada, Poona District.

THE FREE METHODIST MISSION of N. America—Established at Yeotmal, 1893, operates in Berar with a staff of 16 Missionaries and 24 Indian workers. Organised church 1, Communicants 70; 1 Industrial and 6 Elementary schools, with 175 pupils. *Secretary*: Miss Grace E. Barnes, Yeotmal, Berar.

ROYAL ARMY TEMPERANCE ASSOCIATION.

In 1862 there was started among the British troops in Agra a small Society, under the leadership of Rev. G. Gregson, Baptist minister, which after a short time took the name of the Soldiers' Total Abstinence Society.

For some ten years the Society struggled with varying success, spreading to other Garrison Stations, but at the end of that time, though it had obtained recognition from the Horse Guards, and was the first Society whose

Pledge was so recognised, the membership was not more than 1,200. In the year 1873, however, through the influence of the then Commander-in-Chief, the work was placed on a firmer footing, the Rev. Gelson Gregson gave up his whole time to it, and by accompanying the troops through the Afghan War, making an extended tour through Egypt, and bringing the work into close touch with troops, both during peace and war, in the year 1886, when he left the Society, it numbered about 11,000 members. He was followed by a Madras Chaplain, who after two years gave place to the Rev. J. H. Bateson. In 1886, the late Lord Roberts, Commander-in-Chief, organised his Scheme for Regimental Institutes, which have had a wonderful effect on the life of British soldiers in the East; and the Total Abstinence Society was so far incorporated into the scheme as to be allowed ample accommodation, and many practical benefits, in every Unit. At the same time the name was changed to that of the Army Temperance Association, and the work of various societies thus linked together, under one organisation. The effect has been more than even the inaugurator himself ever hoped for. The membership rose steadily from that date and still increases.

Growth of the Society.—In 1889 there were 12,140 members; in 1899, 20,688; in 1909, 30,220, while in 1913-14, the total was 35,000, or over 45 per cent. of the total garrison in India. In 1908, the Secretary having retired after 20 years' work, the Rev. H. C. Martin, M.A., a Chaplain in Bengal, was selected by H. E. Lord Kitchener, to the post of Secretary. Twenty years ago, the Association, which has now for some years been the Royal Army Temperance Association, with the Patronage of King Edward VII, and later of the King Emperor, George V., organised a similar Society in Great Britain, with headquarters in London, from which the troops in South Africa, the Mediterranean, etc., are controlled, so that the whole British Army receives the attention of the Association.

Varied Activities.—What primarily has been the effort of the Association, namely, the decrease of Intemperance, and promotion of sobriety among soldiers has gradually grown into work of every kind, in the interests of soldiers; promotion of sport, occupation of spare time, assistance towards employment in Civil Life, advice and information on the subject of Emigration, provision of Furlough Homes, all tend to enlist the support of officers and men in the Association, and add to its value to them, and to the efficiency of its work, generally. The wonderful change that in late years has taken place in the character of the British Army, in India especially, is due to various causes, including the increased interest in games and sports, the spread of education, the different class of men enlisted, and so on, but the R. A. T. A. has always been given its due share among other causes, by all authorities and Blue Books, and particularly by Officers Commanding Divisions, Brigades and Units. These changes in conduct are seen most plainly in the increased good health of the Army in India.

Effect in the Army.—In the year 1889, 1,174 British soldiers died in India, and 1,800 were invalided unfit for further duty; in 1910, only 330 died, and 484 were invalided. In 1889, 688 underwent treatment for Delirium tremens, in 1910, only 37. In conduct the same difference is to be found; as late as 1901 as many as 545 Courts Martial were held on men for offences due to excessive drinking; in 1906 only 217. In 1904, 2,231 good conduct medals were issued; in 1910, there were 4,581. In regard to the character of the men themselves, who become members of the Association, during their service, we find that in 1912, 59 per cent. on transfer from the Colours obtained Exemplary characters, and 93 per cent. either Exemplary or Very Good; the remainder were for the most part men who, after some years of heavy drinking, had towards the end of their service been persuaded to try and reform themselves, but not soon enough to avoid the consequences of previous excess.

Organisation.—The War has necessarily brought increased work upon this society, the results of which were very quickly apparent. Capacious reception sheds fitted up in the Docks at Bombay and Karachi, proved of the greatest value to troops moving from India, and to the large number coming in: special arrangements aided by a loan from the Government of India, enabled the R. A. T. A. to organise branches in every Territorial unit immediately on arrival, special attention being paid to small detachments and to the Hill stations. In consequence there were, within a month of the completion of the Garrison, over 70 Territorial Branches, containing nearly 50 per cent. of the new arrivals, and this has increased consistently ever since. In addition to covering all troops from Aden to Singapore, the R. A. T. A. is the only Society working among the Troops of I.E.F. "D", the force in the Persian Gulf. Institutes have been opened and the cordial good will of the authorities enables the R. A. T. A. to provide many amenities to the very trying experiences of this Force. The men relieved, and sent back to India for periodic rest, in addition, receive a warm welcome and entertainment at the hands of the Association. The following is the organisation of the Council and management:—

Patron: His Majesty the King Emperor.

President: His Excellency the Commander-in-Chief.

Council:

The General Officers, Heads of Departments, Army Headquarters.

The General Officers Commanding Division.

Two Officers Commanding Regiments.

Officers of the R. A. M. C. and I. M. S.

Two Regimental Quartermasters.

Representatives of the various Churches.

Executive Committee.

Brig.-General T. M. Luke, D.S.O., President.

Lt.-Colonel A. Shairp, C.M.G.

Captain F. H. Moody, M.C.

General Secretary: Herbert Bell.

Auditor: Nelson, King and Simson.

Bankers: Bank of Bengal and Alliance Bank of Simla.

Head Office: Talbot House, Simla.

Official Organ: "On Guard," published monthly. (Rs. 3 per annum.)

THE ANGLO-INDIAN TEMPERANCE ASSOCIATION—Founded in 1888 by the late Mr. W. S. Caine, M.P., is a Home Association which has been the means of establishing a net work of Temperance Societies throughout the Indian Empire, and has provided a common platform upon which Christians, Hindus, Mahomedans and Parsis unite for the moral elevation of the Indian peoples. There are 280 Indian Societies affiliated with the Association. The President is Sir J. Herbert Roberts, Bart., M.P. and Secretaries, Sir Bhalchandra Krishna, Kt., L.M. (Bombay), and Mr. John Turner Rae (London). The interests of the Association are especially represented in Parliament by the President, and the Rt. Hon. T. R. Ferens, M.P., Mr. J. Herbert Lewis, M.P., and the Rt. Hon. Sir Thos. Whittaker, M.P., all of whom are members of the Association's Council. The Association publishes a quarterly journal *Abkari*, edited by Mr. Frederick Grubb. Officers—Arkbrook, Home Park Road, Wimbledon.

THE ALL-INDIA TEMPERANCE CONFERENCE.—Growing out of the Association mentioned above and in closest relation with it is the All-India Temperance Conference, formed in 1903, which meets every year, as a matter of convenience, at the same time and place as the Indian National Congress, but having no official connection with it. The President is elected annually. The President for 1914 was the Rev. Herbert Anderson. The membership of the Conference is the 280 Indian Temperance Societies affiliated with the Anglo-India Temperance Association as above, from each of which delegates are sent to the Annual Meeting of the Conference. Special Councils embracing Presidency Societies are established at Bombay, Allahabad, Calcutta and Madras, each of which has its own local President, Secretary and Committee. The Bombay Temperance Council was inaugurated in 1897. It consists of delegates elected by about 23 different temperance, religious and philanthropic societies at work in Bombay, Poona, Ahmedabad and Surat, including several of the Christian churches, the International Order of Good Templars, the International Order of Rechabites and the Women's Christian Temperance Union. The medium of communication between the Societies composing the Conference is the *Abkari*, published quarterly from England by the A. I. T. A. Amongst the general aims of the Conference may be mentioned :—

The separation of the licensing from the revenue ;

The doing away with the present system of license auctioneering ;

The reduction of the present number of liquor shops and the prevention of the formation of new ones in important positions especially in the crowded areas

The later opening and the earlier closing of liquor shops, and the entire closing of them on public holidays ;

The introduction of Temperance Teaching in the Government Elementary Schools and Colleges, which despite the desire of Government expressed in their Circular letter No. 730-37 of 12th Sept. 1907 to " deal with the subject of intemperance in a few sensible lessons in the sanctioned Readers," has not yet been adequately treated and as in the corresponding schools in England.

The general spread of Total Abstinence principles depends more largely upon the individual Societies constituting the Conference than upon the official body. Amongst the methods are lantern addresses, dramatic representations and singing by itinerant preachers. Twelve paid Lecturers travel through various districts holding public meetings and addressing the masses wherever possible. Educational work is especially to the front in the Punjab district through the Amritsar Society.

Warrant of Precedence.

(Brought up to 1 July 1918.)

VICTORIA, by the Grace of God of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, Empress of India,—

To all to whom these presents shall come: WHEREAS it hath been represented unto Us that it is advisable that the rank and precedence of persons holding appointments in the East Indies as regulated by Our Royal Warrant, dated the 18th day of October 1876, should be altered, We do therefore hereby declare that it is Our will and pleasure that in lieu of the table laid down in Our said recited Warrant, the following table be henceforth observed with respect to the rank and precedence of the persons hereinafter named, *viz.* :—

1. Governor-General and Viceroy of India.

2. Governors of Madras, Bombay and Bengal.

3. President of the Council of the Governor-General.

4. Lieutenant-Governor when in his own territories.

5. Commander-in-Chief in India.

6. Lieutenant-Governor.

7. Chief Justice of Bengal.

8. Bishop of Calcutta, Metropolitan of India.

9. Ordinary Members of the Council of the Governor-General.

10. Commander-in-Chief of His Majesty's Naval Forces in the East Indies.

11. Chief Justice of a High Court other than that of Bengal.

12. Bishops of Madras and Bombay.

13. Ordinary Members of Council in Madras, Bombay and Bengal.

14. General Officers Commanding the Northern and Southern Armies. The Chief of the General Staff.

15. Chief Commissioners of the Central Provinces and Assam, Residents at Hyderabad and in Mysore, and Agents to the Governor-General in Rajputana, Central India, and Baluchistan; Executive Members of the Council of the Lieutenant Governor of Bihar and Orissa; Agent to the Governor-General and Chief Commissioner, N. W. F. Province.

16. Puisne Judges of a High Court.

17. Chief Judge of a Chief Court.

18. Military Officers above the rank of Major-General.

19. Comptroller and Auditor-General.

20. Additional Members of the Council of the Governor-General for making Laws and Regulations and the Chairman of the Railway Board.

21. Bishops of Lahore, Rangoon, Lucknow and Nagpur.

22. Secretaries to the Government of India and Joint Secretary to the Government of India in the P. W. D.; the Members of the Railway Board and Joint Secretaries to the Government of India.

23. Commissioner in Sind.

24. Judges of a Chief Court, Recorder of Rangoon and Judicial Commissioners, Burma.

25. Chief Secretaries to the Governments of Madras and Bombay.

26. Major-Generals, Members of a Board of Revenue, Commissioners of Revenue and Customs, Bombay; Financial Commissioners, Punjab and Burma, Inspector-General of Irrigation; Director-General, Indian Medical Service.

27. Judicial Commissioners, including Additional Judicial Commissioners of Oudh, the Central Provinces, and Sind; the Financial Commissioner, Central Provinces.

28. Additional Members of the Councils of the Governors of Madras, Bombay and Bengal for making Laws and Regulations, Members of the Legislative Council of a Lieutenant-Governor.

29. Vice-Chancellors of Indian Universities.

FIRST CLASS.

30. Members of the Indian Civil Service of 30 years' standing.

31. Advocates General, Calcutta, Madras and Bombay.

32. Commissioners of Divisions, the Superintendent of Port Blair, and Residents, Political Agents, and Superintendents drawing Rs. 2,000 a month and upwards (not being Collectors or Deputy Commissioners of British Districts) within their respective charges; the Revenue and Judicial Commissioner in Baluchistan, within British Baluchistan and the Agency territories.

33. Chief Secretaries to Local Governments other than those of Madras and Bombay.

34. Surveyor-General of India, Directors-General of the Post Office, of Telegraphs in India and of Railways, Chief Engineers, first class, Accountants-General, Military and Public Works Departments, Director, Royal Indian Marine, and Manager, North-Western Railway and Directors of Railway Construction and Railway Traffic.

35. Bishops (not territorial) under license from the Crown.

36. Archdeacons of Calcutta, Madras and Bombay.

37. Brigadiers-Generals; Consuls-General.

38. Commissioners of Divisions; Revenue and Judicial Commissioner in Baluchistan, when in Kalat or Las Bela or elsewhere outside the limits of his charge.

39. Commissioner of Northern India, Salt Revenue, and Opium Agents, Benares and Bihar, and Director, Criminal Intelligence.

40. Secretaries and Joint Secretaries to Local Governments, the Private Secretary to the Viceroy; Members of the Council of a Chief Commissioner.

SECOND CLASS.

41. Members of the Indian Civil Service of 23 years' standing, Colonels and Consuls.

42. Military Secretary to the Viceroy.

43. Judicial Commissioners of the Hyderabad Assigned Districts and Baluchistan; the Superintendent of Port Blair; Residents, Political Agents, and Superintendents drawing Rs. 2,000 a month and upwards (not being Collectors or Deputy Commissioners of British Districts).

44. Inspector-General of Forests in India, and Director of the Geological Survey; Director General of Education in India, the Sanitary Commissioner with the Government of India.

45. Standing Counsel to the Government of India.

46. Directors of Public Instruction, and Inspectors-General of Police and Prisons under Local Governments, Accountants-General and the Director of the Indian Institute of Science.

47. Survey Commissioner and Director of Land Records and Agriculture, Bombay; Commissioners of Settlements; and Controllers of Military Accounts; Military Deputy-Auditors-General and Senior Controller of Military Supply Accounts.

48. Chief or Senior Civil Secretary to a Local Administration.

49. Chief Engineers, second and third classes; Deputy Surveyor-General; Deputy Director-General of Telegraphs in India, Director-in-Chief, Indo-European Telegraph Department and Secretary to the Railway Board.

50. Divisional and District and Sessions Judges, Collectors and Magistrates of Districts; Deputy Commissioners of Districts; Deputy Superintendent of Port Blair; the Chief Officer of each Presidency Municipality within their respective charges. Officers in charge of the Zhob, Quetta-Pishin and Thal-Chotiali Districts, throughout thei respective charges, whether British or Agency territory; Judicial Commissioner, Chhota Nagpur; Chairmen of the Boards of Trustees for the improvement of the Cities of Bombay and Calcutta, and President Rangoon Municipal Committee, within their respective charges.

51. Archdeacons of Lahore, Lucknow, Rangoon and Nagpur.

52. Deputy Secretaries to the Government of India and Director-General of Commercial Intelligence.

53. The Senior Chaplains of the Church of Scotland in Bengal, Madras, and Bombay.

54. Remembrancers of Legal Affairs and Government Advocates under Local Governments; President, Forest Research Institute and College, Dehra Dun, Chief Conservators of Forests.

55. Officers in the First Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service; the Deputy Military Accountant-General and the Junior Controller of Military Supply Accounts.

THIRD CLASS.

56. Members of the Indian Civil Service of 18 years' standing and Lieutenant-Colonels.

57. The Deputy Director, Royal Indian Marine.

58. The Assistant Director, Royal Indian Marine.

59. Commanders and Inspectors of Machinery, Royal Indian Marine.

60. Political Agents and Superintendents drawing less than Rs. 2,000 a month (not being Collectors or Deputy Commissioners of British Districts), District Judges in Lower Burma and Judge of the Small Cause Court, Rangoon, within their respective charges and Political Agent in Kalat.

61. Secretaries to Local Administrations other than those already specified, the first Assistant to the Agent to the Governor-General in Baluchistan, First Asstt. to the Resident at Hyderabad and in Mysore and to the Agents to the Governor-General in Rajputana and Central India.

62. Consulting Engineers to the Government for India and Railways; Chief Inspector for Explosives in India and Consulting Architect to the Government of India.

63. Private Secretaries to Governors.

64. Military Secretaries to Governors.

65. Administrators-General.

66. Sanitary Commissioners under Local Governments; Postmasters-General; the Comptroller, Post Office; Conservators of Forests, first grade; Collectors of Customs at Calcutta, Bombay, Madras, Rangoon and Karachi.

67. Directors of Public Instruction, Inspectors-General of Police and Prisons under Local Administrations and Deputy Director, Criminal Intelligence; Comptrollers and Deputy Auditors-General.

68. Managers of State Railways other than the North-Western Railway; and Chairmen of Port Trusts, Bombay, Calcutta, Madras and Rangoon.

69. Vice-Chairman of the Port Trust, Calcutta; Directors of Traffic and Construction, Indian Telegraph Department; Examiners of Accounts, Public Works Department, first class; Officers of the Superior Revenue Establishment of State Railways, first class, first grade; Superintending Engineers, Public Works Department, first class; Superintendents of the Survey of India Department, first grade; Director of Telegraphs, first class and Electrical Engineer-in-Chief, Telegraph Department; the Chief Examiners of Accounts, North Western State Railway, Eastern Bengal State Railway and Oudh and Rohilkhand State Railway.

70. Inspectors-General of Registration and Directors of Land Records and Agriculture, and Excise Commissioners under Local-Governments and Registrars of Co-operative Credit Societies under Local Governments and Comptroller of Patents.

71. Senior Chaplains other than those already specified.

72. Sheriffs within their own charges.

73. Officers in the Second Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service, Political Agents and Superintendents in Baluchistan drawing less than Rs. 2,000 when outside their respective charges rank in Art. 73, unless their Army rank or standing in the Civil Service gives them a higher place. The same is the case with the Political Agent in Haraoti and Tonk. Principals of Government Colleges, Officers of the Indian Agricultural Service, or of the General List of the Indian Finance Department, or of the Public Works Engineer establishment, or of the Superior Revenue establishment of State Railways, or of the Civil Veterinary, Forest, Survey Mines, Postal, Telegraph, Customs, or Scientific Departments, or officers of the Indian Institute of Science, or Sanitary Engineers, not being Superintending Engineers, or Consulting Architects to Local Governments, drawing Rs. 1,250 a month and upwards, officers of the Police Department drawing Rs. 1,200 a month and upwards, Divisional Controllers of Military Accounts, Director of Survey, Madras, Electrical Adviser to the Government of India, Judicial Commissioner, Chota Nagpur and Secretary to the Bengal Legislative Council and Assistant Secretary to the Government of Bengal in the Legislative Department; Director of Statistics, Consulting Surveyor to the Government of Bombay.

FOURTH CLASS.

74. Members of the Indian Civil Service of 12 years' standing, and Majors, District Judges in lower Burma and Judge of the Small Cause Court, Rangoon, when without their respective charges; Vice-Consuls.

75. Lieutenants of over 8 years' standing, and Chief Engineers of the Royal Indian Marine.

76. Government Solicitors.

77. Inspectors-General of Registration; Sanitary Commissioners; and Directors of Land Records and Agriculture under Local Administrations; the Chief Accountant and the Deputy Accountant in the office of the Director of Ordnance Factories; Registrars of Co-operative Credit Societies and Excise Commissioner under Local Administration.

78. Officers in the Third Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service. Principals of Government Colleges, Officers of the Indian Educational Service and the graded Educational Service, or of the Indian Agricultural Service, or Sanitary Engineers or Consulting Architects, or Electrical Inspectors, drawing Rs. 1,000 a month and upwards; and officers of the General List of the Finance Department, or officers of the higher branch of the Military Accounts Department, or of the Public Works Engineer establishment, or of the Superior Revenue establishment of State Railways, or of the Civil Veterinary, Forest, Survey, Police, Mines, Postal, Telegraph, Customs, or Scientific Departments, drawing Rs. 900 a month and upwards; Assistant Commissioners, Northern India, Salt Revenue, drawing Rs. 800 a month and upwards; Chemical Examiner for Customs and Excise, Collector of Income-Tax, Calcutta, Director, Vaccine Institute, Belgaum; First Assistant Superintendent, Port Blair; Legal Assistant in the Legislative Department of the Government of India, officers of the Archæological Department, drawing Rs. 800 a month and upwards; officers of the Excise and Salt Departments, drawing Rs. 800 a month and upwards; officers of the Provincial Services of not less than 18 years' standing, drawing Rs. 600 a month and upwards: Registrar to the Chief Court, Lower Burma; and Secretary to the Board of Revenue in the Department of Revenue Settlement, Survey, Land Records and Agriculture, Madras, when a member of the Provincial Civil Service, in Article 78.

The entries in the above table apply exclusively to the persons entered therein, and, while regulating their relative precedence with each other, do not apply to the non-official community resident in India, the members of which shall take their place according to usage.

Officers in the above table will take precedence in order of the numbers of the entries. Those included in one number will take precedence *inter se* according to the date of entry into that number.

When an officer holds more than one position in the table, he will be entitled to the highest position accorded to him.

Officers who are temporarily officiating in any number in the table will rank in that number below permanent incumbents.

All officers not mentioned in the above table, whose rank is regulated by comparison with rank in the army, to have the same rank with reference to civil servants as is enjoyed by Military Officers of equal grades.

All other persons who may not be mentioned in this table, to take rank according to general usage, which is to be explained and determined by the Governor-General in Council in case any question shall arise.

Nothing in the foregoing Rules to disturb the existing practice relating to precedence at Native Courts, or on occasions of intercourse with Natives, and the Governor-General in Council to be empowered to make rules for such occasions in case any dispute shall arise.

All ladies to take place according to the rank herein assigned to their respective husbands, with the exception of wives of Peers, and of ladies having precedence in England independently of their husbands, and who are not in rank below the daughters of Barons, such ladies to take place according to their several ranks, with reference to such precedence in England, immediately after the wives of Members of the Council of the Governor-General.

Given at Our Court at Windsor this tenth day of December, in the year of Our Lord One thousand eight hundred and ninety-eight, and in the sixty-second year of Our Reign.

By Her Majesty's Command.

(Signed) GEORGE HAMILTON.

Supplementary Graded List of Civil Offices not Reserved for Members of the Indian Civil Service prepared under the orders of the Governor-General in Council.

*First Class—(No. 55 of the Warrant).

Assay Master of the Mint, Calcutta and Bombay.

Chief Judges of Presidency Courts of Small Causes.

Commissioners of Police, Calcutta, Madras, Bombay, and Rangoon.

Controller of Printing and Stationery.

Deputy Comptroller-General.

Director-General of Archæology.

Director of the Botanical Survey of India.

Inspector-General of Agriculture in India.

Masters of the Mint, Calcutta and Bombay.

Meteorological Reporter to the Government of India.

Superintendent of Revenue Survey, Madras.

Superintendent, Trigonometrical Surveys.

*Second Class—(No. 73 of the Warrant).

Actuary to the Government of India.

Adviser on Chinese Affairs in Burma.

Agent General in India for the British Protectorates in Africa under the Administration of the Foreign Office.

Chief Collector of Customs, Burma.

Chief Constructor of the Royal Indian Marine Dockyard at Bombay.

Chief Inspector of Mines in India.

Chief Presidency Magistrates.

Chief Superintendents of the Telegraph Department.

Collector of Customs and Salt Revenue, Sind.

Collectors and Magistrates of Districts; and Deputy Commissioners of Districts and of Settlements.

Conservators of Forests, 2nd and 3rd Grades.

Consulting Surveyor to the Government of Bombay.

Deputy Accountants-General under Local Governments.

Deputy Directors of Telegraphs.

Deputy Inspectors-General of Police.

Deputy Superintendent of Port Blair.

Directors of the Persian Gulf Section, and of the Persian Section of the Indo-European Telegraph Department.

Directors of Telegraphs, 2nd, 3rd and 4th Classes.

Divisional and District and Sessions Judges.

Examiners of Accounts, Public Works Department, 2nd and 3rd Classes.

Government Astronomer, Madras.

Government Emigration Agents at Calcutta for British Guiana and Natal, and for Trinidad, Fiji, Jamaica, and Mauritius.

Imperial Bacteriologist.

Inspector of Mines to the Government of India.

Librarian, Imperial Library.

Principal of the Mayo College at Ajmer.

Principal of the Rajkumar College at Rajkot.

Officers in charge of the Records of the Government of India.

Officers of the Indian Educational Service, and of the graded Educational Service drawing Rs. 1,250 a month and upwards.

Officers of the Superior Revenue Establishment of State Railways, 1st Class, 2nd and 3rd Grades.

Reporter on Economic Products.

Superintendent of the Royal Botanical Gardens, Calcutta.

Superintendents, Geological Survey of India.

Superintendents of Revenue Survey and Assessment, Bombay.

Superintendents of the Survey of India Department, 2nd Grade.

Superintending Engineers, Public Works Department, 2nd and 3rd Classes.

Under Secretaries to the Government of India.

*Third Class—(No. 78 of the Warrant).

Agricultural Chemist.

Assistant Directors of Dairy Farms.

Assistant Inspector-General of Forests.

Assistant Secretaries to the Government of India.

Chief Chemical Examiner, Central Chemical Laboratory, Nainital.

Collector of Stamp Revenue, Superintendent of Excise Revenue, and Deputy Collector of Land Revenue, Calcutta.

Commander of the steamer employed in the Persian Gulf Section of the Indo-European Telegraph Department.

Constructor of the Royal Indian Marine Dockyard at Bombay and Kidderpore.

Deputy Administrator-General, Bengal.

Deputy Collector of Salt Revenue, Bombay.

Deputy Commissioner of Northern India, Salt Revenue.

Deputy Commissioners of Police, Calcutta and Bombay.

Deputy Commissioners of Salt, Abkari and Customs Department, Madras.

Deputy Conservators of Forests drawing Rs. 800 a month and upwards.

Deputy Directors of Land Records and Agriculture, Madras and Burma.

* The entries in each class are arranged in alphabetical order.

Deputy Director of the Imperial Forest School, Dehra Dun.

Deputy Directors of Revenue Settlements and Deputy Superintendents of Revenue Surveys, Madras.

Deputy Postmasters-General of the 1st, 2nd and 3rd grades.

Deputy Superintendents, Geological Survey of India.

Deputy Superintendents, Survey of India Department.

District Superintendents of Police drawing Rs. 800 a month and upwards.

Engineer and Electrician of the Persian Gulf Section of the Indo-European Telegraph Department.

Examiners of Accounts, Public Works Department, 4th class, 1st and 2nd grades.

Executive Engineers, Public Works Department, 1st and 2nd Grades.

Inspector-General of Railway Mail Service.

Judge of the City Civil Court, Madras.

Judges of Presidency Courts of Small Causes, and First Judge of the Small Cause Court, Rangoon.

Manager of the Cordite Factory, Aruvankadu.

Officers of the Indian Educational Service and of the graded Educational Service, drawing less than Rs. 1,250 a month, but more than Rs. 1,000 a month.

Officers of the Superior Revenue Establishments of the State Railways, Second Class, 1st and 2nd Grades.

Palæontologist, Geological Survey of India.

Presidency Magistrates.

Protector of Emigrants and Superintendent of Emigration, Calcutta.

Public Prosecutor in Sind.

Registrars to the High Courts and to the Chief Court, Punjab.

Sub-Deputy Opium Agents drawing Rs. 800 a month and upwards.

Superintendent of the Indian Museum.

Superintendent of Land Records and Agriculture in Sind.

Superintendents of Stamps and Stationery.

Superintendents, Telegraph Department, 1st and 2nd Grades.

Under the orders of Her Majesty's Secretary of State for India, the following table showing the relative rank of officers in the Army, Royal Navy, and Royal Indian Marine is attached to the Warrant of Precedence for India, published with Home Department Notification No. 328, dated the 10th February 1899:—

Lieut.-Colonels	Captains under 3 years and officers of corresponding rank, Royal Navy. Deputy Director, Royal Indian Marine. Assistant Director, Royal Indian Marine. Commanders, Royal Navy. Commanders, Royal Indian Marine. Staff Commanders and officers of corresponding rank, Royal Navy. Inspectors of Machinery, Royal Indian Marine. Chief Engineers, Royal Indian Marine.	*But Junior to all Lieut-Colonels.*
Majors	Lieutenants 8 years' seniority and officers of corresponding rank, Royal Navy. Lieutenants, Royal Indian Marine, over 8 years' seniority. Engineers' Royal Indian Marine, of and over 9 years' seniority.	*But Junior to all Majors.*
Captains	Lieutenants under 8 years and officers of corresponding rank, Royal Navy. Lieutenants, Royal Indian Marine, under 8 years' seniority. Engineers, Royal Indian Marine, under 9 years' seniority.	*But Junior to all Captains.*
Lieutenants	Sub-Lieutenants and officers of corresponding rank, Royal Navy. Sub-Lieutenants, Royal Indian Marine. Assistant Engineers, Royal Indian Marine.	*But Junior to all Lieutenants.*

SALUTES.

The following is the official table of salutes in Indian Territories—a term which includes all the waters of India within three miles of the coast. "Indian seas," within which some of the salutes are to be given, extend from the North-West entrance of the Straits of Malacca to Cape Comorin, excepting Ceylon, and from Cape Comorin to Aden, including the Maldive and Laccadive Islands, and the Persian Gulf.

Persons.	No. of Guns.
Imperial Salute	101
The King and Emperor when present in person	101
Members of the Royal Family	31
Royal Standard and Royal Salute ..	31
Royal Salute—On the Anniversaries of the Birth, Accession and Coronation of the Reigning Sovereign; the Birthday of the Consort of the Reigning Sovereign; the Birthday of the Queen-Mother; Proclamation Day	31
Viceroy and Governor-General in India.	31
Independent Asiatic Sovereigns	21
Other Foreign Sovereigns	21
Members of their Families and their Standards	21
Ambassadors	19
Governors of Presidencies	17
The President of the Council of India..	17
Governor-General of Portuguese Settlements in India	17
Governor of Pondicherry	17
Governors of His Majesty's Colonies ..	17
Lieutenant-Governors of Provinces in India	15
Commander-in-Chief in India (If a Field Marshal)	19
Commander-in-Chief in India (If a General)	17
Commander-in-Chief of His Majesty's Naval Forces	
Generals and Admirals, or their Flags ..	15
Members of the Viceroy's Council ..	15
Plenipotentiaries and Envoys	15
Lieut.-Governors of His Majesty's Colonies	15
Vice-Admirals, Lieut.-Generals, or their Flags	13
Agents to the Viceroy and Governor-General	13
Agent to the Governor of Bombay in Kathiawar	13
Residents	13
Chief Commissioners of Provinces, and Commissioner of Sind	13
Members of the Executive Council of a Local Government	13
Rear-Admirals and Major-Generals, or their Flags	11
Political Agents and Charges d'Affaires ..	11
Commodores of the first-class, and Brigadier-Generals	9
The Portuguese Governor of Damaun ..	9
The Governor of Diu	9
Return salutes to Foreign Men-of-war	
Return salutes to Captains of the Navy, and Naval Officers of inferior rank ..	1

Permanent Salutes to Chiefs.

Salutes of 21 *guns.*

Baroda. The Maharaja (Gaekwar) of.
Gwalior. The Maharaja (Scindia) of.
Hyderabad. The Nizam of.
Mysore. The Maharaja of.

Salutes of 19 *guns.*

Bhopal. The Begam (or Nawab) of.
Indore. The Maharaja (Holkar) of.
Jammu and Kashmir. The Maharaja of.
Kalat. The Khan (Wali) of.
Kolhapur. The Maharaja of.
Mewar (Udaipur). The Maharana of.
Travancore. The Maharaja of.

Salutes of 17 *guns.*

Bahawalpur. The Nawab of.
Bharatpur. The Maharaja of.
Bikaner. The Maharaja of.
Bundi. The Maharao Raja of.
Cochin. The Raja of.
Cutch. The Maharao of
Jaipur. The Maharaja of.
Karauli. The Maharaja of.
Kotah. The Maharao of.
Marwar (Jodhpur). The Maharaja of.
Patiala. The Maharaja of.
Rewa. The Maharaja of.
Tonk. The Nawab of.

Salutes of 15 *guns.*

Alwar. The Maharaja of.
Banswara. The Maharawal of.
Bhutan. The Maharaja of.
Datia. The Maharaja of.
Dewas (senior Branch). The Maharaja of.
Dewas (Junior Branch). The Maharaja of.
Dhar. The Maharaja of.
Dholpur. The Maharaj Rana of.
Dungarpur. The Maharawal of.
Idar. The Maharaja of.
Jaisalmer. The Maharawal of.
Khairpur. The Mir of.
Kishangarh. The Maharaja of.

Orchha. The Maharaja of.
Partabgarh. The Maharawal of.
Sikkim. The Maharaja of.
Sirohi. The Maharao of.

Salutes of 13 *guns.*

Benares. The Maharaja of.
Bhavnagar. The Maharaja of.
Cooch Behar. The Maharaja of.
Dhrangadhra. The Maharaja of.
Jaora. The Nawab of.
Jind. The Maharaja of.
Junagadh (or Junagarh). The Nawab of.
Kapurthala. The Maharaja of.
Navanagar (or Nawanagar). The Maharaja of.
Porbandar. The Maharaja of.
Rampur. The Nawab of.
Ratlam. The Raja of.
Tippera. The Raja of.

Salutes of 11 *guns.*

Ajaigarh. The Maharaja of.
Baoni. The Nawab of.
Bijawar. The Maharaja of.
Cambay. The Nawab of.
Chamba. The Raja of.
Charkhari. The Maharaja of.
Chhatarpur. The Raja of.
Faridkot. The Raja of.
Gondal. The Thakur Saheb of.
Janjira. The Nawab of.
Jhabua. The Raja of.
Jhalawar. The Maharaja-Rana of.
Kahlur (Bilaspur). The Raja of.
Maler Kotla. The Nawab of.
Mandi. The Raja of.
Manipur. The Maharaja of.
Morvi. The Thakur Saheb of.
Nabha. The Maharaja of.
Narsinghgarh. The Raja of.
Palanpur. The Nawab of.
Panna. The Maharaja of.
Pudukkottai (or Puddukottai). The Raja of.
Radhanpur. The Nawab of.
Rajgarh. The Raja of.
Rajpipla. The Raja of.
Sailana. The Raja of.
Samthar. The Raja of.
Sirmur (Nahan). The Maharaja of.
Sitamau. The Raja of.
Suket. The Raja of.
Tehri (Garhwal). The Raja of.

Salutes of 9 *guns.*

Alirajpur. The Raja of.
Balasinor (or Vadasinor). The Nawab (Babi) of.
Bansda. The Raja of.
Baraundha. The Raja of.
Bariya. The Raja of.
Barwani. The Rana of.
Chhota Udepur. The Raja of.
Dharampur. The Raja of.
Dhrol. The Thakur Saheb of.
Fadthli (Shukra). The Sultan of.
Hsipaw (or Thibaw). The Sawbwa of.
Karond (Kalahandi). The Raja of.
Kengtung (or Kyaington). The Sawbwa of.
Khilchipur. The Rao Bahadur of.
Kishn and Socotra. The Sultan of.
Lahej (or Al Hauta). The Sultan of.
Limri. The Thakor Saheb of.
Loharu. The Nawab of.
Lunawara (or Lunawada). The Raja of.
Maihar. The Raja of.
Mayurbhanj The Maharaja of.
Möng Nai. The Sawbwa of.
Mudhol. The Chief of.
Nagod. The Raja of.
Palitana. The Thakor Saheb of.
Patna. The Maharaja of.
Rajkot. The Thakor Saheb of.
Sachin. The Nawab of.
Sangli. The Chief of.
Savantvadi. The Sar Desai of.
Shehr and Mokalla. The Sultan of.
Sonpur. The Raja of.
Sunth. The Raja of.
Vankaner (or Wankaner). The Raj Saheb of.
Wadhwan (or Vadwan). The Thakor Saheb of.
Yawnghwe (or Nyaungywe). The Sawbwa of.

Personal Salutes.

Salutes of 21 *guns.*

Jaipur. Honorary Major-General His Highness Maharajadhiraja Sir Sawai Madho Singh Bahadur, G.C.S.I., G.C.I.E., G.C.V.O., G.B.E., LL.D., Maharaja of.

Jammu and Kashmir. Honorary Lieutenant-General His Highness Maharaja Sir Pratap Singh, G.C.S.I., G.C.I.E., G.B.E., Maharaja of.

Kalat. His Highness Mir Sir Mahmad Khan, G.C.I.E., Wali of.

Kolhapur. Honorary Colonel His Highness Shahu Chhatrapati Maharaj, G.C.S.I., G.C.I.E., G.C.V.O., LL.D., Maharaja of.

Mewar (Udaipur). His Highness Maharajadhiraja Maharana Sir Fateh Singh Bahadur, G.C.S.I., G.C.I.E., G.C.V.O., Maharana of.

Travancore. His Highness Sri Maharaja Rama Sir Bala Rama Varma Bahadur, G.C.S.I., G.C.I.E., Maharaja of.

Salutes of 19 *guns.*

Bikaner. Honorary Major-General His Highness Maharaja Sir Ganga Singh Bahadur, G.C.S.I., G.C.I.E., K.C.B., A.D.C., Maharaja of

Mysore. Her Highness Maharani Kempa Nanjammanni Avaru Vanivilas Sannidhana, C.I., Maharani of

Nepal. Honorary Lieut.-General His Excellency Maharaja Sir Chandra Shumshere Jung Bahadur, Rana, G.C.B., G.C.S.I., G.C.V.O., D.C.L., Prime Minister, Marshal of.

Patiala. Honorary Major-General His Highness Maharajadhiraja Sir Bhupendar Singh Mahindar Bahadur, G.C.I.E., G.B.E., Maharaja of.

Salutes of 17 *guns.*

Jodhpur. Honorary Lieut.-General His Highness Maharaja Bahadur Sir Pratab Singh, G.C.B., G.C.S.I., G.C.V.O., A.D.C., late Regent of.

Orchha. His Highness Maharaja Mahindra Sawai Sir Partap Singh Bahadur, G.C.S.I., G.C.I.E., Maharaja of.

Sirohi. His Highness Maharajadhiraja Maharao Sir Kesri Singh Bahadur, G.C.I.E., K.C.S.I., Maharao of.

Salutes of 15 *guns.*

Benares. His Highness Maharaja Sir Parbhu Narayen Singh Bahadur, G.C.I.E., Maharaja of.

Bhavnagar. Honorary Lieutenant-Colonel His Highness Maharaja Sir Bhavsinhji Takhtsinhji, K.C.S.I., Maharaja of.

Jind. Honorary Lieutenant-Colonel His Highness Maharaja Sir Ranbir Singh, Rajendra Bahadur, G.C.I.E., K.C.S.I., Maharaja of.

Junagadh (or Junagarh). His Highness Vali Ahad Mohabat Khanji, Rasulkhanji, Nawab of.

Kapurthala. Honorary Lieutenant-Colonel His Highness Maharaja Sir Jagatjit Singh Bahadur, G.C.S.I., Maharaja of.

Navanagar (or Nawanagar). Honorary Lieutenant-Colonel His Highness Maharaja Shri Sir Ranjitsinhji Vibhaji, K.C.S.I., Maharaja of.

Rampur. Honorary Colonel His Highness Nawab Sir Muhammad Hamid Ali Khan, Bahadur, G.C.I.E., G.C.V.O., A.D.C., Nawab of.

Salute of 13 *guns.*

Janjira. His Highness Sidi Sir Ahmad Khan Sidi Ibrahim Khan, G.C.I.E., Nawab of.

Salutes of 11 *guns.*

Barwani. His Highness Rana Sir Ranjit Singh, Rana of.

Dhor. His Highness Meherban Shanker Rav Chimnaji, Pant Sachin of.

His Highness Aga Sir Sultan Muhammad Shah Aga Khan, G.C.S.I., G.C.I.E., of Bombay.

Sachin. Honorary Captain Nawab Sidi Ibrahim Mohamed Yakub Khan, Nawab of.

Shehr and Mokalla. His Highness Sultan Sir Ghalib bin Awadth Al-Kayti, K.C.I.E., Sultan of.

Wankaner (or Wankaner). Honorary Captain Raj Saheb Sir Amarsinhji Baresinhji, K.C.I.E., Raj Saheb of.

Salutes of 9 *guns.*

Banta, Maharana Shri Hamirsinhji Jaswatsinhji, Maharana of.

Dhala Amir Nasr bin Shaif bin Sef bin Abdul Hadi, Amir of.

Danker. Maharajadhiraja Komal Deo, Chief of.

Jas Bela. Mir Kamal Khan, C.I.E., Jam of.

Limkhindi. Honorary Captain Meherban Sir Parashramrav Ramchandrara., K.C.I.E., Chief of.

Mowgpeng. H. Kun Hsang Awn, K.S.M., Sawbwa of.

Local Salutes.

Salutes of 21 *guns.*

Bhopal. The Begam (or Nawab of). Within the limits of their own territories, permanently.

Indore. The Maharaja (Holkar) of. Within the limits of their own territories, permanently.

Jammu and Kashmir. The Maharaja of. Within the limits of their own territories, permanently.

Salutes of 13 *guns.*

His Excellency the Governor of Bushire. At the termination of an official visit.

Salutes of 12 *guns.*

His Excellency Shaikh Sir Khaz'al Khan, G.C.I.E., K.C.S.I., Shaikh of Muhammerah. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

Salute of 11 *guns.*

His Excellency Shaikh Isa bin Ali al Khalifah, C.S.I., Shaikh of Bahrain. Fired by British Ships of War in the Persian Gulf on the termination of an official visit by this Chief.

Salutes of 5 *guns.*

The Shaikh of Kuwait. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Bahrain. Fired by British Ships of War in the Persian Gulf after the termination of an official visit by this Chief.

The Shaikh of Abu Dhabi. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

Eldest son of the Shaikh of Muhammerah. Fired on occasions when he visits one of His Majesty's Ships as his father's representative.

Eldest son of the Shaikh of Kuwait. Fired on occasions when he visits one of His Majesty's Ships as his father's representative.

The Governor of Muhammerab. At the termination of an official visit.

The Governor of Bunder Abbas. At the termination of an official visit.

The Governor of Lingah. At the termination of an official visit.

Salutes of 3 *guns.*

The Shaikh of Dibai. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Shargah. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Ajman. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Umm-ul-Qaiwain. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Ras-al-Kheima. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

Eldest son of the Shaikh of Bahrain. Fired on occasion when he visits one of His Majesty's Ships as his father's representative.

SALARIES OF CHIEF OFFICERS.

The following are the tables of salaries sanctioned for the Chief Officers of the Administration of India. The tables are liable to variation, and it should be noted that the pay of members of the Indian Civil Service is subject to a deduction of 4 per cent. for subscription towards annuity :—

	Pay per Annum Rs.
Viceroy and Governor-General	2,50,800
Private Secretary to Viceroy	24,000
Military Secretary and Aide-de-Camp to Viceroy	18,000
Surgeon to Viceroy	14,400
Commander-in-Chief of the Forces in India	1,00,000
Military Secretary to Commander-in-Chief in India	18,000
Members (6) of the Governor-General's Council	80,000
President, Railway Board	60,000 or 72,000
Member, Railway Board	48,000
Secretaries to the Government of India in the Army and Public Works and Legislative Departments	42,000
Secretaries to the Government of India in the Finance, Foreign, Home, Revenue and Agriculture, Commerce and Industry and Education Departments	48,000
Educational Commissioner	30,000 to 36,000
Comptroller and Auditor-General	54,000
Controller of Currency	36,000 to 42,000
2 Accountants-General, Class I	33,000
3 ,, ,, ,, II	30,000
4 ,, ,, ,, III	27,000
1 Commissioner of Northern India Salt Revenue	30,000
1 Director-General of Posts and Telegraphs	42,000 to 48,000
2 Postmasters-General	30,000
2 ,, ,,	27,000
3 ,, ,,	24,000
4 ,, ,,	21,000
1 Director, Geological Survey of India	24,000
Deputy Secretaries to the Government of India in the Finance and Foreign Departments	27,000
Deputy Secretaries to the Government of India in the Legislative and Home Departments	24,000
Superintendent of Port Blair	30,000 to 36,000
1 Chief Commissioner of Delhi	36,000
1 Director, Criminal Intelligence	36,000
1 Deputy Director, Criminal Intelligence	18,000 to 24,000
Inspector-General of Forests	31,800
Surveyor-General, Survey of India	36,000
1 Chief Inspector of Mines in India	21,000 to 24,200
1 Director-General, Indian Medical Service	36,000
1 Sanitary Commissioner with the Government of India	24,000 to 30,000
1 Director-General of Archæology in India	20,400
1 Administrator-General of Bengal	24,000
1 Director-General of Commercial Intelligence	24,000
1 ,, ,, Indian Observatories	18,000 to 24,000
Controller of Stationery and Printing	18,000 to 27,000
Governors of Madras, Bombay, and Bengal	1,20,000
Private Secretaries to Governors of Madras, Bombay, and Bengal	18,000
Surgeons to Governors of Madras, Bombay, and Bengal	12,000
Military Secretary and Aide-de-Camp to Governors of Madras, Bombay, and Bengal	12,000
Bishop of Calcutta	45,972
Bishop of Madras	25,600
Bishop of Bombay	25,600
Chief Justice of Bengal	72,000
Chief Justices of Madras, Bombay, and the North-Western Provinces	60,000
Puisne Judges of the High Courts of Calcutta (5), Madras (6), Bombay (6), and the North-Western Provinces (6)	48,000
Chief Judge of the Chief Court, Punjab	48,000
,, ,, ,, Burma	48,000
Judges of the Chief Court, Punjab (4), and Burma (4), except Chief Judges	42,000
6 Political Residents, 1st class	48,000
9 ,, ,, 2nd class	33,000
Political Officers on time scale	5,400 to 28,800

Provincial Salaries.

N.B.—Acting and other allowances are not included in the salaries shown.

		Pay per Annum. Rs.
	Bengal.	
3	Members of Council	64,000
1	Member of the Board of Revenue	45,000
5	Commissioners of Divisions	35,000
1	Chief Secretary to Government	45,000
8	Secretaries to Government	33,000
3	Under Secretaries to Government	12,000
1	Excise Commissioner	21,600
1	Chairman of Corporation of Calcutta	30,000
1	Deputy ditto	12,000 to 18,000
1	Collector of Customs, Calcutta	30,000
2	Magistrates and Collectors, 1st grade	27,000
3	" " 2nd "	21,600
4	" " 3rd "	18,000
7	Joint Magistrates and Deputy Collectors, 1st grade	10,800
7	" " " 2nd "	8,400
	Assistant Magistrates and Collectors	4,800 to 6,000
3	District and Sessions Judges, 1st grade	36,000
3	" " " 2nd "	30,000
1	" " " 3rd "	24,000
1	Chief Judge, Presidency Courts of Small Causes	24,000 to 30,000
4	Judges " " "	12,000, 13,500 and 15,600 and 16,800
1	Advocate General	48,000
1	Solicitor to Government	60,000
1	Registrar, High Court	20,400
1	Inspector-General of Police	30,000 to 36,000
1	Director of Public Instruction	24,000 to 30,000
1	Private Secretary to H. E. The Governor	18,000
1	Director of Agriculture	27,000
1	Director of Land Record	18,000
1	Secretary of the Board of Revenue	18,000
	Bihar and Orissa.	
1	Lieutenant Governor	1,00,000
3	Members of the Executive Council	60,000
1	Member of the Board of Revenue	42,000
1	Chief Secretary to Government	36,000
2	Secretaries to Government	27,000
3	Under Secretaries to Government	12,000
5	Commissioners	35,000
0	Magistrates and Collectors, 1st grade	27,000
1	" " 2nd "	21,600
2	" " 3rd "	18,000
1	Joint Magistrates and Deputy Collectors, 1st grade	10,800
0	" " " 2nd "	8,400
	-Assistant Magistrates and Collectors	4,800 to 6,000
2	District and Sessions Judges, 1st grade	36,000
5	" " 2nd "	30,000
6	" " 3rd "	24,000
1	Commissioner of Excise and Salt	17,280
1	Director of Land Records and Surveys	21,600
1	Director of Agriculture	18,000
1	Inspector-General of Police	30,000 to 36,000
1	Director of Public Instruction	24,000

		Pay per Annum Rs.
	Assam.	
1	Chief Commissioner	56,000
2	Commissioners	33,000
2	Secretaries to Chief Commissioner	18,000 and 21,600
6	Deputy Commissioners, 1st grade	27,000
7	,, ,, 2nd ,,	21,600
7	,, ,, 3rd ,,	18,000
4	Assistant ,, 1st ,,	10,800
4	,, ,, 2nd ,,	8,400
—	,, ,, 3rd ,,	5,400 — 6,000
2	Under Secretaries to Chief Commissioner	12,000
1	District and Sessions Judge	30,000
1	Inspector-General of Police	27,000
1	Director of Public Instruction	15,000 to 18,000
1	Director of Land Records and Agriculture	18,000
1	Excise Commissioner	18,000
	United Provinces of Agra and Oudh.	
1	Lieutenant Governor	1,00,000
1	Chief Secretary to Government	36,000
2	Members of the Board of Revenue	42,000
2	Secretaries to Government	20,000 and 22,000
1	Secretary to Board of Revenue	22,000
3	Under Secretaries to Government	12,000
9	Commissioners of Divisions	35,000
1	Commissioner for Kumaon	30,000
1	Opium Agent	30,000 to 36,000
19	Magistrates and Collectors, 1st grade	27,000
17	,, ,, 2nd ,,	22,000
4	Deputy Commissioners, 1st grade	22,000
16	,, ,, 2nd ,,	20,000
15	Joint Magistrates, 1st grade	12,000
8	Assistant Commissioners, 1st grade	9,600
21	Joint Magistrates and Assistant Commissioners, 2nd grade	8,400
—	Assistant ,, ,, ,,	4,800 to 6,000
3	Deputy Commissioners for Kumaon	12,000, 12,000 and 18,000
1	City Magistrate, Lucknow	12,000
1	Superintendent, Dehra Dun	18,000
1	Judicial Commissioner	42,000
2	Additional Judicial Commissioners	40,000
2	District and Sessions Judges, 1st grade	36,000
7	,, ,, 2nd ,,	30,000
7	,, ,, 3rd ,,	27,000
10	,, ,, 4th ,,	22,000
5	,, ,, 5th ,,	20,000
1	Registrar, High Court	19,200
1	Inspector-General of Police	30,000 to 36,000
1	Director of Public Instruction	24,000
	Punjab.	
1	Lieutenant Governor	1,00,000
1	Chief Secretary to Government	36,000
2	Secretaries to Government	18,000 and 21,600
2	Under Secretaries to Government	12,000
1	Under Secretary, Police Department, and Inspector-General of Police	30,000
1	Under Secretary, Educational Department	24,000
2	Financial Commissioners	42,000
2	Secretaries to Financial Commissioner	10,800 and 8,400
5	Commissioners	33,000

		Pay per Annum. Rs.
	Punjab—*contd.*	
4	Deputy Commissioners, 1st grade	27,000
4	,, ,, 2nd ,,	21,600
4	,, ,, 3rd ,,	18,000
4	Assistant Commissioners, 1st grade	10,800
4	,, ,, 2nd ,,	8,400
9	,, ,, 3rd ,,	6,000
2	Divisional Judges, 1st grade	33,000
4	,, ,, 2nd ,,	30,000
6	,, ,, 3rd ,,	27,000
0	,, ,, 4th ,,	21,600
0	District Judges	18,000
1	Sub-Judge and Judge, Small Cause Court, Simla	15,000
1	Registrar of the Chief Court	15,000
1	Legal Remembrancer	24,000
1	Inspector-General of Police	24,000
1	Director of Public Instruction	24,000
	Burma.	
1	Lieutenant Governor	1,00,000
1	Chief Secretary to Government	36,000
2	Secretaries ,,	21,600
2	Under Secretaries	6,000
1	Assistant Secretary	6,000
1	Financial Commissioner	42,000
1	Settlement Commissioner and Director of Land Records	33,000
1	Deputy Director of Land Records	19,200
1	Secretary to Financial Commissioner	12,000
1	Director of Agriculture	21,600
8	Commissioners of Divisions	33,000
2	Deputy Commissioners, 1st grade	27,000
4	,, ,, 2nd ,,	21,600
5	,, ,, 3rd ,,	18,000
2	Assistant ,, 1st ,,	12,000
3	,, ,, 2nd ,,	8,400
0	,, ,, 3rd ,,	7,200
2	,, ,, 4th ,,	5,400 to 6,000
1	Judicial Commissioner	42,000
2	Divisional Judges, 1st grade	33,000
1	,, ,, 2nd ,,	30,000
2	,, ,, 3rd ,,	27,000
2	,, ,, 4th ,,	21,600
3	District ,,	18,000
1	Registrar, Chief Court, Lower Burma	8,400
1	Government Advocate	18,000 to 21,600
	Central Provinces.	
1	Chief Commissioner	62,000
1	Financial Commissioner	42,000
5	Commissioners of Divisions	33,000
3	Deputy Commissioners, 1st class	27,000
3	,, ,, 2nd ,,	21,600
1	,, ,, 3rd ,,	18,000
0	Assistant ,, 1st ,,	10,800
0	,, ,, 2nd ,,	8,400
-	,, ,, 3rd ,,	4,800 to 6,000
1	Judicial Commissioner	42,000
2	Additional Judicial Commissioners	36,000
4	Divisional and Sessions Judges	14,800 to 18,240
2	District and Sessions Judges	14,800 and 20,400
1	Inspector-General of Police	27,000 to 33,000
1	Director of Public Instruction	18,000 to 24,000

		Pay per Annum, Rs.
	Madras.	
2	Members of Council	64,000
1	First Member, Board of Revenue	45,000
1	Second Member ,,	42,000
1	Third Member ,,	36,000
1	Fourth Member ,,	36,000
1	Chief Secretary to Government	45,000
1	Revenue Secretary to Government	36,000
1	Secretary to Government	30,000
1	Private Secretary to Governor	18,000
2	Under Secretaries to Government	12,000
1	Secretary to Commissioners of Land Revenues	18,000 to 21,600
1	Secretary to the Commissioners of Salt, &c.	18,000 to 21,600
22	District and Sessions Judges	18,000 to 21,600
1	Registrar, High Court	18,000 to 21,600
1	Advocate General	21,600
1	Government Solicitor	13,200
1	Chief Judge, Small Cause Court	24,000
1	Commissioner of Coorg	21,600 to 24,000
1	Resident in Travancore and Cochin	33,600
1	Inspector-General of Police	30,000 to 36,000
9	Collectors, 1st grade	30,000
14	,, 2nd ,,	27,000
1	President, Corporation of Madras	20,820
6	Collectors, 3rd grade	21,600
7	Sub-Collectors and Joint Magistrates, 1st grade	14,400
16	,, ,, ,, 2nd ,,	10,800
16	,, ,, ,, 3rd ,,	8,400
–	Assistant Collectors and Magistrates	4,800 to 6,000
1	Director of Public Instruction	24,000 to 30,000
	Bombay.	
3	Members of Council	64,000
1	Chief Secretary to Government	45,000
1	Secretary to Government	37,500
1	,, ,,	30,000
1	Private Secretary to Governor	18,000
2	Under Secretaries to Government	15,000
1	Inspector-General of Prisons	21,600 to 24,000
1	Inspector-General of Police	30,000 to 36,000
4	Commissioners of Divisions	36,000 and 42,000
1	Commissioner in Sind	45,000
1	Municipal Commissioner, Bombay	36,000
13	Senior Collectors	27,900
15	Junior ,,	21,600
9	Assistant Collectors, 1st grade	14,400
17	,, ,, 2nd ,,	10,800
18	,, ,, 3rd ,,	8,400
–	,, ,, 4th ,,	4,800 to 6,000
1	Collector in Sind	21,600
1	Assistant Commissioner in Sind	13,200
1	Judicial Commissioner in Sind	42,000
2	Additional Judicial Commissioner in Sind	36,000
3	District and Sessions Judges—1st grade	30,000
6	,, ,, ,, 2nd ,,	27,900
11	,, ,, ,, 3rd ,,	21,600
1	Prothonotary and Registrar, High Court	20,400 to 24,000
1	Administrator General and Official Trustee	24,000 to 30,000
1	Registrar, High Court	20,400
1	Chief Judge, Small Cause Court	24,000
1	Remembrancer of Legal Affairs	30,000
1	Government Solicitor	30,000
1	Advocate General	24,000
1	Agent to the Governor in Kathiawar	36,000
1	Resident and Senior Political Agent	27,000
27	Political Officers on time scale of pay	5,400 to 10,200 & 11,400 to 23,400
1	Director of Public Instruction	24,000 to 30,000

Indian Orders

The Star of India.

The Order of the Star of India was instituted y Queen Victoria in 1861, and enlarged in 1866, 876, 1897, 1902, and 1911, and the dignity of Knight Grand Commander may be conferred on 'rinces or Chiefs of India, or upon British sub- ects for important and loyal service rendered to he Indian Empire; the second and third classes or services in the Indian Empire of not less than hirty years in the department of the Secretary f State for India. It consists of the Sovereign, Grand Master (the Viceroy of India), the first lass of forty-four Knights Grand Commanders 22 British and 22 Indian), the second class of ne hundred Knights Commanders, and the hird class of two hundred Companions, exclu- ve of Extra and Honorary Members, as well as ertain additional Knights and Companions.

The Insignia are (i) the Collar of gold, com- osed of the lotus of India, of palm branches ed together in satire, of the united red and hite rose, and in the centre an Imperial Crown; ll enamelled in their proper colours and linked ogether by gold chains. (ii) The Star of a Knight Grand Commander is composed of rays f gold issuing from a centre, having thereon a ar of five points in diamonds resting upon a ght blue enamelled circular riband, tied at the ads and inscribed with the motto of the Order, *Heaven's Light our Guide*, also in diamonds. hat of a Knight Commander is somewhat ifferent, and is described below. (iii) The adge, an onyx cameo having Her Majesty ueen Victoria's Royal Effigy thereon, set in a erforated and ornamental oval, containing the otto of the Order surmounted by a star of five oints, all in diamonds. (iv) The Mantle of ght blue satin lined with white, and fastened ith a cordon of white silk with blue and silver assels. On the left side a representation of the tar of the Order.

The ribbon of the Order (four inches wide for nights Grand Commanders) is sky-blue, having narrow white stripe towards either edge, and worn from the right shoulder to the left side. Knight Commander wears (a) around his neck ribbon two inches in width, of the same colours id pattern as a Knight Grand Commander, and endent therefrom a badge of a smaller size,) on his left breast a Star composed of rays f silver issuing from a gold centre, having ereon a silver star of five points resting upon light blue enamelled circular ribbon, tied at the ds, inscribed with the motto of the Order in amonds. A Companion wears from his left east a badge of the same form as appointed r a Knight Commander, but of a smaller size ndent to a like ribbon of the breadth of one d a half inches. All Insignia are returnable death to the Central Chancery, or if the ipient was resident in India, to the Secretary the Order at Calcutta.

Sovereign of the Order:—H. I. M. The ing.

Grand Master of the Order:—His Excel- ncy the Viceroy and Governor-General of dia, the Right Honourable Baron Chelmsford.

Honorary Knights Grand Commanders (G. C. S. I.)

The Zil-es-Sultan of Persia
Prince Louis d'Arenberg

Extra Knights Grand Commanders (G. C. S. I.)

H. M. the Queen Empress
H. R. H. The Duke of Connaught

Knights Grand Commanders (G. C. S. I.)

H. H. the Gaekwar of Baroda
H. H. the Maharana of Udaipur
H. H. the Maharajah of Jaipur
H. H. the Maharaja of Travancore
The Marquis of Lansdowne
Baron Reay
H. H. the Maharaja of Jammu and Kashmir
H. H. the Maharaja of Kohlapur
H. H. the Maharaja of Gwalior
Lord Harris
H. H. the Maharaja of Rewa
H. H. the Maharaja of Jodhpur
Baron Macdonnell
Earl Curzon of Keddleston
Baron Sandhurst
Lord George Hamilton
H. H. the Raja of Cochin
Baron Ampthill
Maharaja Sir Chandra Shamsher Jung of Nepa
H. H. the Maharaja of Orchha
H. H. the Maharaja of Mysore
Baron Hardinge of Penshurst
H. H. the Begum of Bhopal
Sir Steuart Bayley
Sir Dennis Fitz-Patrick
Sir Dighton Probyn
Baron Sydenham
Sir Arthur Lawley
Sir John Hewett
H. H. the Maharaja of Bikaner
H. H. Maha Rao of Kotah
General Sir O'Moore Creagh
General Sir Edmund George Barrow
H. H. the Raja of Kapurthala
H. H. the Nizam of Hyderabad
H. H. the Aga Khan
H. H. the Nawab of Tonk.
H. H. the Maharao of Cutch.
Baron Carmichael of Skirling.
Baron Pentland.
Baron Willingdon.

Knights Commanders (K. C. S. I.)

Sir Joseph West Ridgeway
Sir David Miller Barbour
Sir Phillip Perceval Hutchins
Sir Henry Edward Stokes
Sir Henry Mortimer Durand
Maj.-Gen. Sir Oliver Richardson Newmarch
Sir Frederick William Richards Fryer
H. H. Maharao of Sirohi
Sir Courtenay Peregrine Ilbert
H. H. Maharao of Bundi
Sir William Mackworth Young

Sir Charles James Lyall
Sir William John Cunningham
Sir Richard Udny
Colonel Sir Howard Melliss
Sir Arthur Charles Trevor
Sir John Frederick Price
Sir Charles Montgomery Rivaz
Sir James Digges La Touche
Sir Henry Martin Winterbotham
Sir James Monteath
Lieut.-Col. Sir Donald Robertson
Sir Andrew Henderson Leith Fraser
Sir Hugh Shakespear Barnes
Sir William Roe Hooper
Sir Arundel Tagg Arundel
Sir Thomas Raleigh
H. H. Maharaja of Bhavnagar
Sir Arthur Henry Temple Martindale
Sir James Thomson
Sir Joseph Bampfylde Fuller
H. H. Raja of Chamba
Lieut.-Col. Arthur John, Baron Stamfordham
Sir Thomas William Holderness
Sir Lancelot Hare
Sir Charles Stuart Bayley
H. H. Raj Rana of Jhalawar
Raja Sir Tasadduk Rasul Khan of Jahangirabad, Oudh
Sir James Wilson
H. H. Maharaja of Alwar
H. H. Raja of Jind
Sir Henry Erle Richards
Sir Gabriel Stokes
Sir George Stuart Forbes
H. H. Raja of Ratlam
Sir James Lyle, Baron Inchcape
Sir Harvey Adamson
Nawab of Murshidabad
Lieut.-Col. Sir James Robert Dunlop-Smith
Sir John Ontario Miller
Sir Lionel Montague Jacob
Sir Murray Hammick
Sir Krishna Govinda Gupta
Sir Leslie Alexander Selim Porter
Sir Spencer Harcourt Butler
Sir Robert Warrand Carlyle
H. H. Maharaja of Kishangarh
Sir Reginald Henry Craddock
Sir James McCrone Douie
Sir James Scorgie Meston
Sir Benjamin Robertson
Sir Richard Amphlett Lamb
Maharajadhiraj of Burdwan
Sir Elliot Graham Colvin
Sir Trevredyn Rashleigh Wynne
Sir George Casson Walker
H. H. Raja of Dhar
H. H. Raja of Dewas State (Senior Branch)
Surg.-Gen. Sir Francis Wollaston Trevor
H. H. Maharaja of Bhutan
Sir John Nathaniel Atkinson
Sir William Thomson Morison
Sir George Head Barclay
General Sir James Willcocks
Lieut.-Col. Sir G. Roos-Keppel
Sir M. F. O'Dwyer
Sir Salyid Ali Imam
Sir D. C. Baillie
Sir Michael William Fenton
Sir Harold Arthur Stuart
Colonel Sir Sidney Gerald Burrard
Sir William Henry Soloman
Genl. Sir W. R. Birdwood,
Sir P. Sundaram Aiyar Sivaswami Aiyar
Sir Frederick William Duke
Sir Edward Albert Gait
H. H. Chief of Maler Kotla
H. H. Chief of Sirmur
Sir William Henry Clark
Sir William Stevenson Meyer
General Sir Arthur Arnold Barrett
Major-General Sir Percy Zachariah Cox
Sir Steyning William Edgerley
Sir Harrington Verney Lovett
Sir Robert Woodburn Gillan
Maharaj Sri Sir Bhairon Singh Bahadur
Sir Alexander Gordon Cardew
Lieut.-Col. Sir Hugh Daly
Sir C. H. A. Hill
H. H. Raja Malhar Rao Baba Saheb Pavar Dewas (Junior Branch)
H. H. Maharaja Bahadur of Cooch-Behar
H. H. Maharaja Jam Saheb of Navanagar
H. H. The Raj Saheb of Dhrangadra
Lieut.-Col. Sir F. E. Younghusband
Sir T. Morrison
Major-Gen. G. M. Kirkpatrick
Major-Gen. R. C. O. Stuart
Sir Charles Edmond Fox
Sir George Rivers Lowndes
H. H. Maharajadhiraja Maharawal Sir Jowahir Singh Bahadur of Jeisalmir
Sir Archdale Earle
Sir Stuart Mitford Fraser
Sir John Strathedan Campbell
Sir Frank George Sly
H. H. the Maharaja of Datia
H. H. the Maharaj Rana of Dholpur
Sir William Vincent
Sir Thomas Holland

Companions (C. S. I.)

Lieut.-Col. William Dickinson
Gen. Sir Peter Stark Lumsden
Major-Gen. Beresford Lovett
Major-Gen. Phillip Durham Henderson
Col. Leopold John Herbert Grey
Major-Gen. Henry Wylie
Sir Henry William Primrose
Lieut.-Gen. Michael Weekes Willoughby
Raja Piari Mohan Mukharji of Uttarpara
Sir Frederick Russell Hogg
Col. Charles Edward Yate
William Rudolph Henry Merk
Chhatrapati Jagirdar of Alipura
Col. John Clerk
James Richard Naylor
Sardar Jiwan Singh of Shahzadpur
Col. George Herbert Trevor
Col. Frederick J. Home
Lieut.-Col. Henry St. Patrick Maxwell
Sir Jervoise Athelstane Baines
Sir Thomas Salter Pyne
Alan Cadell
Arthur Forbes
Sir Arthur Upton Fanshawe
Col. George Fletcher Ottley Boughey
James Fairbairn Finlay
Joseph Parker
Charles Walter Bolton
Horace Frederick D'Oyly Moule
Surg.-Gen. James Cleghorn
Col. Thomas Gracey
Col. James Aloysius Miley
Sir Henry Babington Smith
Henry Aiken Anderson

ut.-Col. Sir Arthur Henry McMahon
· Henry Evan Murchison James
mes Knox Spence
arles William Odling
exander Walmesley Cruickshank
vid Norton
omas Stoker
Edward Richard Henry
cas White King
Mackenzie Dalzell Chalmers
gn.-Gen. David Sinclair
ry Farrington Evans
-Col. John Muir Hunter
hard Gillies Hardy
Frederick Robert Upcott
rbert Charles Fanshawe
Frederick Styles Philpin Lely
rge Robert Irwin
ut.-Gen. Sir George Lloyd Reiliy Richardson
bert Burton Buckley
hur Frederick Cox
rles Gerwien Bayne
rtley Kennedy
Edwin Grant-Burls
lor-Gen. Trevor Bruce Tyler
liam Charles Macpherson
Col. James Alexander Lawrence Montgomery
Gen. Henry Doveton Hutchinson
a of Burdwan
vab of Pahasu
a Badan Singh of Malaudh
James White Thurburn
ed Brereton
liam Thomas Hall
nard Townsend Greer
Robert Henry Jennings
Louis William Dane
Alfred Macdonald Bulteel Irwin
James Bird Hutchinson
a Ram Pal of Kotlehr
mann Michael Kisch
Cecil Michael Wilford Brett
bert Bradley
rank Campbell Gates
Mitchell Holms
y Seymour Vessey Fitzgerald
ol. Willoughby Pitcairn Kennedy
Narendra Chand
ur Delaval Younghusband
r Theodore Barrow
Howard Goad
cis Alexander Slacke
id Husain Bilgrami
y Comyn Lyon
mon Robert Sutherland
eorge Watson Shaw
am Arbuthnot Inglis
er Edward Younghusband
r-General Herbert Mullaly
Alexander Broun
Henry Finnis
Gen. Sir Alfred William Lambart Bayly
ice Walter Fox-Strangways
am Lochiel Sapte Lovett Cameron
dward Douglas Maclagan
Madho Lal
.-Col. Charles Herbert
shutosh Mukharji
Gen. Sir Henry Montague Pakington
wkes
ir Rash Behari Ghosh
ls Capel Harrison
r. Sir Hamilton Pym Freer-Smith

Andrew Edmond Castlestuart Stuart
Norman Goodford Cholmeley
Walter Francis Rice
Havilland Le Mesurier
Cecil Edward Francis Bunbury
Major-General Reginald Henry Mahon
Rear-Admiral Allen Thomas Hunt
Henry Walter Badock
James Mollison
Pirajirao Bapu Sahib Ghatge
John Walter Hose
Charles Ernest Vear Goument
Herbert Lovely Eales
Frederick Beadon Bryant
George Moss Harriott
Ernest Herbert Cooper Walsh
Sir Edward Vere Levinge
Robert Nathan
Lieut.-Col. Charles Archer
James Peter Orr
Herbert Alexander Casson
William Axel Hertz
Sir Mahadev Bhaskar Chaubal
George Seymour Curtis
Brevet-Lieut.-Colonel Clive Wigram
Herbert Thompson
Rao Bahadur Nanak Chand
Surgeon-General William Burney Bannerman
Lieut.-Col. Sir John Ramsay
Stuart Lockwood Maddox
Gilbert Thomas Walker
Lieut.-Col. Phillip Richard Thornhagh Gurdon
Khan Zulfikar Ali Khan of Maler Kotla
Surgeon-General George Francis Angelo Harris
Edmund Vivian Gabriel
John Stuart Donald
Henry Montague Segundo Mathews
Arthur Crommelin Hankin
Faridoonji Jamshedji
Maulvi Ahmad Hussain
Horace Charles Mules
H. H. Raja Bije Chand; Chief of Kahlur
Lieut.-Col. Arthur Russell Aldridge
Lieut.-Col. Mathew Richard Henry Wilson
John Charles Burnham
Col. Thomas Francis Bruce Renny-Tailyour.
Michael Kennedy
Thakor Karansinghji Vajirajji
Col. Alain Chartier de Lotbiniere Joly de Lotbiniere
Major-General Sir Herbert Vaughan Cox
Brev.-Col. Robert Smeiton Maclagan
Lieut.-Col. Charles Mowbray Dallas
Edward Henry Scamander Clarke
Sir Jagadish Chandra Bose
Sir Abbas Ali Baig
Oswald Campbell Lees
Lt.-Col. G. G. Giffard
F. W. Johnston
William Henry Lucas
A. L. Saunders
Vakhatsinghji Kesrisinghji Thakor Saheb of Sayla
Paul Gregory Melitus
Lieut.-Col. Albert Edward Woods
William Exall Tempest Bennett
Hon. Maj. Nawabzada Obaidullah Khan
William Ogilvie Horne
William Harrison Moreland, C.I.E.
Diwan Bhdr. Chaube Raghunath Das, of Kotah
Col. Lestock Hamilton Reid
Surg.-Gen. Henry Wickham Stevenson

Hon. Lieut.-Col. Raja of Lambagraon
Lionel Davidson
George Carmichael
Lieut.-Col. Donald John Campbell MacNabb
Lieut.-Col. Henry Walter George Cole
Henry Venn Cobb
Henry Wheeler
F. W. Newmarch
Sardar Daljit Singh of Jullunder
Lt.-Col. Raj Kumar Bir Bikram Singh
Walter Maude
Sir Bertram S. Carey
Sir Michael Nethersole
Henry Ashbrooke Crump
William James Reid
Mysore Kantharaj Urs
O. V. Bosanquet
Walter Gunnell Wood
John Cornwallis Godley
A. Butterworth
S. M. Edwardes
N. D. Beatson-Bell
Lt.-Col. F. H. Elliott
H. J. Maynard
R. P. Russell
J. B. Brunyate
Lt.-Col. A. B. Dew
W. M. Hailey
H. T. Keeling
A. H. Grant
H. Sharp.
L. C. Porter
R. R. Scott
Lieut.-Col. J. W. E. Douglas-Scott Montagu
Rear-Admiral Arthur Hayes-Sadler
Laurence Robertson
John Ghest Cumming
Lieut.-Col. Stephen Lushington Aplin
Sir James Houssemayne DuBoulay
John Barry Wood
H. R. C. Dobbs
Maior-General Sir Arthur Wigram
Col. L. A. C. Girdon
T. A. Chalmers
R. Burn
J. H. Kerr
G. B. H. Fall
Major-General W. C. Knight
Lt.-Col. C. Kaye
Herbert Francis Webb Gillman
Patrick James Fagan
Col. Hormasji Edulji Banatwalla, I.M.S.
Lt.-Col. Lawrence Impey.
Col. Benjamin William Marlow
Lt.-Col. Harold Fenton Jacob
Lt.-Col. Francis Beville Prideaux
Lt.-Col. Stuart George Knox
Col. Hugh Whitchurch Perry
Henry Cecil Ferard
Charles Evelyn Arbuthnot William Oldham
Evan Maconochie
Francis Coope French
Brevet Col. C. W. G. Richardson
Lt.-Col. A. P. Trevor
Horatio Norman Bolton
Louis James Kershaw
H. S. Laurence
L. E. Buckley
C. H. Bompas
M. M. S. Gubbay
Maj.-Gen. R. Wapshare
Brig-Gen. J. M. Walter

OFFICERS OF THE ORDER.

Sir John Wood
Registrar, Col. Sir Douglas Dawson

The Most Eminent Order of the Indian Empire.

This Order, instituted by H. M. Que Victoria, Empress of India, Jan. 1st, 1878, a extended and enlarged in 1886, 1887, 1892, 18 and 1902,is conferred for services rendered to t Indian Empire, and consists of the Sovereign Grand Master, thirty-two Knights Grand Co manders (of whom the Grand Master is first a principal), ninety-two Knights Command and an indefinite number of Companions (exceeding, without special statute, 20 nomi tions in any one year); also Extra and Honor Members over and above the vacancies cau by promotion to a higher class of the Order, well as certain Additional Knights and C panions appointed by special statute Jan. 1909, commemorative of the 50th Anniversa of the assumption of Crown Govt. in India.

The Insignia are: (*i*) The COLLAR of g formed of elephants, lotus flowers, peacock their pride, and Indian roses, in the centre Imperial Crown. the whole linked together chains; (*ii*) The STAR of the Knight Gr Commander, comprised of five rays of sil having a small ray of gold between each of th the whole alternately plain and scaled, issu from a gold centre, having thereon Her Maj Queen Victoria's Royal Effigy, within a pu circle, edged and lettered gold, inscribed *peratricis Auspiciis*, and surmounted by an perial Crown gold; (*iii*) The BADGE, consis of a rose, enamelled gules, barbed vert, having in the centre Her Majesty Queen toria's Royal Effigy, within a purple circle, e and lettered gold, inscribed *Imperatricis piciis*, surmounted by an Imperial Crown, gold; (*iv*) The MANTLE is of Imperial pu satin, lined with and fastened by a cordo white silk, with purple silk and gold ta attached. On the left side a representatio the Star of the Order.

A Knight Commander wears: (*a*) around neck a ribbon two inches in width, of the s colour (purple) and pattern as a Knight G Commander, pendent therefrom a badge smaller size: (*b*) on his left breast a star, sim to that of the first class, but the rays of w are all of silver.

The above mentioned Insignia are retu at death to the Central Chancery, or if Knight was resident in India to the Secre of the Order at Calcutta.

A Companion wears from the left brea badge (not returnable at death) of the same as appointed for a Knight Commander, b smaller size, pendent to a like ribbon o breadth of one and a half inches.

Sovereign of the Order:—The Emperor of India.

Grand Master of the Order:—E Chelmsford.

Honorary Knights Grand Commanders, (G. C. I. E.)

The *ex*-Emperor of Korea
Shaikh Sir Khazal Khan, Shaikh of Mohammerah and Dependencies.

Extra Knight Grand Commander (G. C. I. E.)

The Duke of Connaught

Knights Grand Commanders (G.C.I.E.)

Lord Reay
The Rao of Cutch
Lord Lansdowne
Lord Harris
The Nawab of Tonk
The Wali of Kalat
Lord Sandhurst
Maharaja of Karauli
Thakur Sahib of Gondal
Thakur Sahib of Morvi
Sir George Faudel-Phillips
The Maharaja of Benares
Sir Sher Muhammad Khan of Palanpur
Lord Curzon of Keddleston
The Maharaja of Jaipur
The Maharaja of Orchha
Lord Ampthill
Maharao of Bundi
General Sir Alfred Gaselee
The Maha Rao of Sirohi
The Aga Khan
The Maharaja of Travancore
Lord Lamington
The Begam of Bhopal
Sir Edmond Elles
The Nawab of Janjira
Sir Walter Laurence
Sir Arthur Lawley
The Maharaja of Bikaner
The Maha Rao of Kotah
Lord Sydenham
The Nawab of Rampur
Maharaj Sir Kishen Parshad
Lord Hardinge
Lord Carmichael
Maharaja of Kashmir
Sir Louis Dane
Maharaja of Bobbili
Lord Stamfordham
Sir Guy Fleetwood Wilson
Sir John Jordan
The Maharana of Udaipur
The Maharaja of Patiala
The Mir of Khairpur
The Raja of Cochin
Lord Pentland
The Raja of Pudukottai
Lord Willingdon
Maharaja of Kolhapur
The Yuvaraja of Mysore
Sir Charles Stuart Bayley
Maharaja of Darbhanga
H. H. the Maharaja of Jind
The Earl of Ronaldshay
Sir Michael Francis O'Dwyer
Lt.-Col. Sir George Olaf Roos-Keppel
Sir Gulam Muhammad Ali, Prince of Arcot
Maj-Gen. Sir Percy Zachariah Cox
H. H. the Maharaja of Indore
The Raja of Cochin
Sir William Duke

Honorary Knights Commanders (K. C. I. E.)

Sir Leon E. Clement-Thomas
H. E. Shaikh Sir Khazal Khan, Shaikh of Mohammerah and Dependencies
Dr. Sven Hedin
The Sultan of Shehr and Mokalla
Prince Ismail Mirza, Amir-i-Akram
Cavaliere Filippo De'Filippi
General Sir Bhim Shum-Shere Jung Bahadur, Rana of Nepal

Knights Commanders (K. C. I. E.)

Sir Alexander Meadows Rendel
Surg.-Gen. Sir Benjamin Simpson
Sir Albert James Leppoc Cappel
Sir Donald Mackenzie Wallace
Sir Alfred Woodley Croft
Sir Bradford Leslie
Sir Arthur Baron Carnock
Sir Guildford Molesworth
Sir Frederick Russell Hogg
Sir Henry Mortimer Durand
Sir Arthur George Macpherson
Sir Henry Stuart Cunningham
Raja of Lunawara
Sir Roper Lethbridge
Sir Henry Hoyle Howorth
Sir Edward Charles Kayll Ollivant
Sir Henry Seymour King
Baron Inchcape
Col. Sir Henry Revenshaw Thuillier
Sir Wm. R. Brooke
Maharaja of Gidhaur
Lieut.-Col. Sir Adelbert Cecil Talbot
H. H. Maharaja of Ajaigarh
Sir Henry William Bliss
Nawab of Loharu
Sir John Jardine
Rear-Admiral Sir John Hext
Sir Mancherjee Bhownaggree
Col. Sir Thomas Holdich
Sir Andrew Wingate
Raja Sir Harnam Singh, Ahluwalia
Sir S. Subramaniya Aiyar
Sir Alexander Cunningham
Sir Henry Evan Murchison James
Sir James George Scott
Sir Lawrence Hugh Jenkins
Sir Herbert Thirkell White
Sir Frederick Augustus Nicholson
Sir Arthur Upton Fanshawe
Raja Dhiraj of Shahpura
Sir Gangadhar Rao Ganesh, Chief of Miraj (Senior Branch)
Brevet-Col. Sir Buchanan Scott
Col. Sir John Walter Ottley
H. H. Raja of Sailana
Lieut.-Col. Sir Francis Edward Younghusband
Major-General Sir James R. L. Macdonald
Sri Sir Ugyen Wangchuk, Tongsa Penlop of Bhutan
Sir Fredric Styles Philpin Lely
Lt.-Col. Sir Arthur Henry McMahon
Gen. Sir Donald James Sim McLeod
Maharaja of Balrampur
Sir Francis Whitmore Smith
Nawab of Pahasu
Sir Arthur Naylor Wollaston
Sir Thomas Henry Holland
Nawab of Hyderabad

H. H. Maharajadhiraja of Kishangarh
Raja of Mahmudabad
Sir Trevredyn Rashleigh Wynne
Sir Richard Morris Dane
Maharajadhiraja of Burdwan
Raja of Poonch
Sir William Stevenson Meyer
Sir Wilhelm Schlich
Sir Theodore Morison
Lieut.-Gen. Sir Robert Irvin Scallon
Sir John David Rees
Rear-Admiral Sir Edmond John Warre Slade
Sir John Benton
Sir Frederick William Duke
Sir Archdale Earle
Sir Charles Stewart-Wilson
Lieut.-Gen. Sir Malcolm Henry Stanley Grover
Sir Charles Raitt Cleveland
Lieut.-Gen. Sir Douglas Haig
Lieut.-Col. Sir Hugh Daly
Sir Henry Parsall Burt
Sir James Houssemayne DuBoulay
Sir Rajendra Nath Mukharji
Lieut.-Col. Sir Henry Beaufoy Thornhill
Sir Gangadhar Madho Chitnavis
H. H. Nawab of Jaora State
H. H. Raja of Sitamau State
Raj Sahib Sir Amarsinhji Banesinhji (Vankaner)
Sir Ram Krishna Gopal Bhandarkar
Sir Michael Filose
Rear-Adm. Sr. Colin Richard Keppel
Sir John Stanley
Sir Saint-Hill Eardley-Wilmot
Sir Francis Edward Spring
Maharaja Sri Sir Vickrama Deo
Rana Sir Sheoraz Singh (U P)
H. H. Maharaja of Alwar
H. H. Maharawat of Partabgarh
H. H. Maharaja of Bijawar State, Bundelkhand
Sir John Twigg
Sir George Abraham Grierson
Sir Marc Aurel Stein
Maj.-Gen. Sir Francis Henry Rutherford Drummond
H. H. Maharawal of Dungarpur
Nawab Sir Bahram Khan
Sir Henry Alexander Kirk
Sir Alfred Gibbs Bourne
Chief of Jamkhandi
Sir Frank Campbell Gates
Sir George Macartney
Sir Edward Douglas Maclagan
Maj.-Gen. Sir George John Younghusband
Sir Brian Egerton.
Maharaja of Dinajpur.
Sir Stephen George Sale
Sir Prabhashankar D. Pattan
Maharaja of Kasimbazaar
Lieut.-Col. Sir John Ramsay
Sir William Maxwell
Sir Feridoonji Jamshedji, C.S.I.
Sir Mokshagundam Visvesvaraya
His Highness the Chief of Samthar
Sir John Stuart Donald
Lieut.-Col. Sir Percy Molesworth Sykes
Sir Edward Vere Levinge
Nawab Sir Syed Shams-ul-Huda
Raja Sir Rampal Singh
Sir Alexander Henderson Diack
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Registrar, Col. Sir Douglas Dawson

The Imperial Order of the Crown of India.

This Order was instituted Jan. 1, 1878, and for a like purpose with the simultaneously created Order of the Indian Empire. It consists of the Queen and Queen Mother with some Royal Princesses, and the female relatives of Indian Princes or of persons who have held conspicuous offices in connection with India. Badge, the royal cipher in jewels within an oval surmounted by an Heraldic Crown and attached to a bow of light blue watered ribbon, edged white. Designation, the letters C. I.

Sovereign of the Order.

THE KING-EMPEROR OF INDIA.

Ladies of the Order (C. I.)

Her Majesty The Queen
H. M. Queen Alexandra
H. M. the Queen of Norway
H. R. H. the Princess Royal
H. R. H. the Princess Victoria
H. R. H. the Princess Christian of Scheleswig-Holstein
H. R. H. the Princess Louise (Duchess of Argyll)
H. R. H. Princess Henry of Battenberg
H. I. and R. H. the Dowager Duchess of Saxe-Coburg and Gotha
H. R. H. the Duchess of Albany
H. R. H. the Duchess of Cumberland
H. R. H. the Princess Frederica Baroness of von Pawel-Rammingen
H. R. H. the Dowager Grand Duchess of Mecklenburg-Strelitz
H. I. & R. H. the Grand Duchess Cyril of Russia
H. R. H. the Hereditary Princess of Hohenlohe-Langenburg
H. R. H. the Crown Princess of Sweden
H. R. H. the Princess Patricia of Connaught
H. R. H. the Princess Victoria Elizabeth Augustine Charlotte, Hereditary Princess of Saxe-Meiningen
H. H. the Princess Victoria of Schleswig-Holstein
H. H. the Princess Marie-Louise of Schleswig-Holstein
Baroness Kinloss
Dowager Countess of Mayo
Lady Jane Emma Crichton
Dowager Countess of Lytton
Dowager Baroness Lawrence
Lady Temple
Dowager Baroness Napier of Magdala
Lady Grant Duff
Dowager Marchioness of Dufferin and Ava
Lady Randolph Spencer-Churchill
Baroness Reay
H. H. Maharani of Cooch-Behar
Marchioness of Lansdowne

Baroness Harris
H. H. Maharani of Gwalior
Constance Mary Baroness Wenlock
H. H. Maharani Sahib Chimna Bai Gaekwar
H. H. Rani Sahib of Gondal
H. H. the Dowager Maharani of Mysore
Lady George Hamilton
H. H. the Maharani Sahiba of Udaipur
Alice, Baroness Northcote
Nora Henrietta, Countess Roberts
Amelia Maria, Lady White
Mary Katherine, Lady Lockhart
Baroness Ampthill
The Lady Willingdon
Countess of Minto
Marchioness of Crewe
H. H. Begum of Bhopal
H. H. Maharani Shri Nundkunvarba

THE KAISAR-I-HIND MEDAL.

This decoration was instituted in 1900, the preamble to the Royal Warrant—which was amended in 1901 and 1912—being as follows:—"Whereas We, taking into Our Royal consideration that there do not exist adequate means whereby We can reward important and useful services rendered to Us in Our Indian Empire in the advancement of the public interests of Our said Empire, and taking also into consideration the expediency of distinguishing such services by some mark of Our Royal favour: Now for the purpose of attaining an end so desirable as that of thus distinguishing such services aforesaid, We have instituted and created, and by these presents for Us, Our Heirs and Successors, do institute and create a new Decoration." The decoration is styled "The Kaisar-i-Hind Medal for Public Service in India" and consists of two classes. The Medal is an oval shaped Badge or Decoration—in gold for the First Class and in silver for the Second Class—with the Royal Cypher on one side and on the reverse the words "Kaisar-i-Hind for Public Service in India;" it is suspended on the left breast by a dark blue ribbon.

Recipients of the 1st Class.

Abdus Samad Khan of Rampur
Ahmad, Khan Bahadur Qazi Khalil-ud-Din
Allnut, The Rev. Samuel Scott
Amarchand, Rao Bahadur Ramnarayan
Ampthill, Margaret, Baroness
Anderson, The Rev. H.
Ashton, Albert Frederick
Barber, Benjamin Russell
Barnes, Major Ernest
Basu, Sir Kailas Chandra, Rai Bahadur
Beaty, Francis Montagu Algernon
Beck, Miss Emma Josephine
Bell, Lt.-Col. Charles Thornhill
Benson, Lady
Bentley, Dr. Charles Albert
Bhandari, Rai Bahadur Gopal Das
Bhavnagar, Maharani of,
Bijni, Rani Abhayeswaridebi of
Bikanir, Maharaja of
Bingley, Major General Alfred
Biwalkar, Sardar Parashram Krishnarao
Bonig, Max Carl Christian
Booth-Tucker Frederick St. George de Lautour
Bosanquet, Oswald Vivian
Bott, Captain R. H.
Bramley, Percy Brooke
Bray, Denys DeSaumarez
Broadway, Alexander
Brown, Rev. A. E.
Brown, Rev. W. E. W.
Brunton, James Forest
Buchanan, Rev. John
Burn, Richard
Burnett, General Sir Charles John
Calnan, Denis
Campbell, Colonel Sir Robert Neil
Campion, John Montriou
Carleton, Marcus Bradford
Carlyle, Lady
Carmichael, Lady
Carter, Edward Clark
Chandra, Rai Bahadur Hari Mohan
Chapman, R. A. B.
Chatterton, Alfred
Chaudhuri, Raja Sarat Chandra Rai
Chetty, Dewan Bahadur K. P. Puttanna
Chinai, Ardeshir Dinshaji
Chitnavis, Shankar Madho
Coldstream, William
Comley, Mrs. Alice
Copeland, Theodore Benfey
Cousens, Henry
Cox, Arthur Frederick
Crawford, Francis Colomb
Crouch, H. U.
Cullen, Rev. Dr. Peter
Dane, Lady
Darbhanga, Maharaja of
Das, Ram Saran
Davies, Arthur
Davies, Mrs. Edwin
Dawson, Brevet-Colonel Charles Hutton
Deane, Lieutenant-Colonel Herbert Edward
deLotbiniere, Lieutenant-Colonel Alain C. Joly
Dewas (Junior Branch), Raja of
Dhar, Her Highness the Rani Sahiba Luxmiba Pavar of
Dhingra, Dr. Behari La
DuBern, Jules Emile
Dyson, Colonel Thomas Edward
Earle, The Hon'ble Sir Archdale
Ewing, The Rev. Dr. J. C. R.
Ferard, Mrs. Ida Margaret
Firth, Mrs. E. J. (with Gold Bar)
Francis, Edward Belcham
Gandhi, Mohandas Karamchand
Ghosal, Mr. Jyotsnanath
Glazebrook, N. S.
Glenn, Henry James Heamey
Gonzaga, Rev. Mother
Graham, The Rev. John Anderson
Graham, Mrs. Kate
Grattan, Colonel Henry William
Guilford, The Rev. E. (with Gold Bar)
Gwalior, Maharaja of
Gwyther, Lieut.-Colonel Arthur
Hahn, The Rev. Ferdinand
Haig, Lieutenant-Colonel Patrick Balfour
Hall, Harold Fielding Patrick

Hamilton, Major Robert Edward Archibald
Harvest, Lieut.-Colonel Herbert de Vere
Hildesley, The Rev. Alfred Herbert
Hodgson, Edward Marsden
Hoeck, Rev. Father L. V.
Hogan, W. J. Alexander
Holderness, Sir Thomas William
Home, Walter
Howard, Mrs. Gabrielle Louise Caroline
Hume, The Rev. R. A.
Husband, Major James
Hutchinson, Sir Sydney Hutton Cooper
Hutchinson, Major William Gordon
Hutwa, The Maharani Jnan Manjari Kuari of
Hydari, Mrs. Amina
Irvine, Lieutenant-Colonel Thomas Walter
Ismail, Muhammad Yusaf
Ives, Harry William Maclean
Jackson, Rev. James Chadwick
James, Lieutenant-Colonel Charles Henry
Jankibai
Josephine, Sister
Kapur, Raja Ban Bihari
Kelly, The Rev. E. W.
King, Mrs. D.
Kirkpatrick, Clarence
Klopsch, Dr. Louis
Knox, Lady
Ko, Taw Sein
Kothari, The Hon'ble Mr. Jehangir Hormusji
Kunverba, Her Highness Shri Nund, Maharani of Bhavnagar
Lamb, The Hon'ble Sir Richard Amphlett
Lindsay, D'Arcy
Ling, Miss Catharine Frances
Lovett, The Hon'ble Mr. Harrington Verney
Luck, Wilfred Henry
Lukis, Lady
Lyall, Frank Frederick
Lyons, Surgeon-General Robert William Steele
MacLean, Rev. J. H.
Macwatt, Lieutenant-Colonel Robert Charles
Madhav Rao, Vishwanath Patankar
Madhavan Nair, Dr. T.
Mahdi Husain, Nawab Mirza
Mahomed Ajmal Khan, Hakim, Hazik-ul-Mulk
Malegaon, Raje of
Malvi Tribhuvandas Narottamdas
Maneckchand, Seth Motilal
Mann, Dr. Harold
Manners-Smith, The Hon'ble Mr. Francis St. George
Mary of St. Paula, Rev. Mother
Mayes, Herbert Frederick
McCarrison, Major Robert
McCloghry, Colonel James
Miller, The Rev. William
Minto, Mary Caroline
Morgan, George
Muhammad Husain Khan, Khan Bahadur
Muir Mackenzie, Lady Therese
Murray, George Ramsay
Naidu, Mrs. Sarojini
Nanak Chand
Nariman, Dr. Temulji Bhikaji
Narsinghgarh, Her Highness the Rani Shiv Kunwar Sahiba of
Nepalia, Rani of Tehri
Neve, Dr. Arthur
Neve, Dr. Earnest
Newton, Dr. Henry Martyn
Nichols, the Rev. Dr. Charles Alvord
Nicholson Sir Frederick Augustus
Nisbet, John
Noyce, William Florey
O'Byrne, Gerald John Evangelist
Oldham, Charles Evelyn Arbuthnot William
O'Donnel, Dr. Thomas Joseph
O'Meara, Major Eugene John
Pandit Sitaram Narayan
Panna, Maharani of
Paranjpye, Raghunath Purshottam
Prasad, Lt.-Col. Kanta
Pedley, Dr. Thomas Franklin
Pennell, Mrs. A. M.
Phelps, Edwin Ashby
Pitcher, Colonel Duncan George
Plant, Captain William Charles Trew Gray Gambier
Pollen, Dr. J.
Poynder, Lieut.-Colonel John Leopold
Reed, Miss M.
Reid, Frederick David
Reynolds, Leonard William
Richmond, Mr. Thomas
Rivington, The Rev. Canon, C. S.
Robson, Dr. Robert George
Rondy, The Very Rev. The Abbe Noel
Rost, Lt.-Col. Ernest Reinhold
Row, Dr. Raghavendra
Roy, Babu Harendra Lal
Roy, Rao Jogendra Narayan
Sailana, Raja of
Samthar, Maharaja of
Sanderson, Lady
Sell, The Rev. Canon Edward
Semple, Lieut.-Colonel Sir David
Seth Jay Dayal
Sharp, Henry
Sharpe, Walter Samuel
Shepherd, Rev. James
Sheppard, Mrs. Adeline B.
Sheppard, William Didsbury
Shillidy, the Rev. John
Shore, Lieut.-Colonel Robert
Shoubridge, Major Charles Alban Grevis
Singh, Munshi Ajit
Singh, Raja Bhagwan Bakhsh
Singh, Rai Hira
Singh, Raja Kamaleshwari Pershad
Sinha, Purnendu Narayan
Sita Bai
Skinner, The Rev. Dr. William
Skrefsrud, The Rev. Larsorsen
Smith, Lieut.-Colonel Henry
Sorabji, Miss Cornelia
Southon, Major Charles Edward
Spence, Christina Philippa Agnes
St. Leger, William Douglas
St. Lucie, Reverend Mother
Stanes, Robert
Stokes, Dr. William
Sukhdeo Prasad, Pandit
Surat Kuar, Rani Sahiba
Tabard, The Rev. Antoine Marie
Talati, Edalji Dorabji
Taylor, The Rev. George Pritchard
Taylor, Dr. Herbert F. Lechmere
Thomas, The Rev. Stephen Sylvester
Thurston, Edgar
Tilly, Harry Lindsay
Tindall, Christian
Tucker, Major William Hancock
Turner, Dr. John Andrew
Tyndale-Biscoe, The Rev. Cecil Earle
Tyrrell, Major Jasper Robert Joly

Vandyke, Frederick Reginald
Vaughan, Lieut.-Colonel Joseph Charles Stœlke
Venugopala, Raja Bahadur
Vernon, Mrs. Margaret
Victoria, Sister Mary
Wadhwan, The Rani Sahib Sita Bai of
Wadia, Hormasji Ardeshir
Wagner, Rev. Paul
Wake, Lieut.-Colonel Edward St. Aubyn (with Gold Bar)
Wakefield, George Edward Campbell
Walker, Lady Fanny
Walter, Major Albert Elijah
Ward, Major Ellacott Leamon
Waterhouse, Miss Agnes May
Westcott, The Rt. Rev. Dr. Foss.
Wheeler, The Rev. Edward Montague
Whitehead, Mrs. J.
Whitton, The Rev. David
Wilkins, Colonel James Sutherland
Wilkinson, Lieut.-Colonel Edmund
Willingdon, The Lady
Wilson-Johnston, Joseph
Winter, Edgar Francis Latimer
Wood, Arthur Robert
Young, The Rev. John Cameron
Younghusband, Arthur Delaval
Younghusband, Lieut.-Col. Sir Francis Edward

Recipients of the 2nd Class.

Abul Fath Moulvi Saiyed
Abdul Ghani
Abdul Hussain, Mian Bhai
Abdul Kadir
Abdul Majid Khan, Colonel Muhammad
Abdul Majid Khan
Abdur Rahim
Abdur Razzak Khan, Subadar
Advani, Motiram Showkiram
Advani, Mrs. Motiram
Agha Mohamed Khalil-Bin-Mohamed Karim
Ahmad, Mr. Mukhtar
Ali Shabash, Shaikh
Allen, Rev. Frank Van
Amar Nath, Lala
Amar Singh
Anastasie, Sister
Anderson, Andrew
Andrew, The Rev. Adam
Anscomb, Major Allen Mellers
Antia, Jamshedji Merwanji
Apte, Hari Narayan
Askwith, Miss Anne Jane
Atkinson, Lady Constance
Augustin, The Rev. Father
Aung, Mrs. Hla
Aziz Husain, Khan Sahib Mir
Badri Parshad
Baker, Honorary Major Thomas
Banerji, Professor Jamini Nath
Banks, Dr. Charles
Bapat, Risaldar Sadashiva Krishna
Barclay, Mrs. Edith Martha
Bardsley, Miss Jane Blissett
Barnett, Miss Maude
Barstow, Mrs. Melaine
Barton, Mrs. Sybil
Baw, Maung Kan
Bayley, Lieut.-Colonel Edward Charles
Beatson-Bell, Nicholas Dodd
Beg, Mirza Kalich Beg Fridun
Best, James Theodore
Beville, Lieut.-Colonel Francis Granville
Bhagwandas, Bai Zaoerbai
Bhajan Lal
Bhan, Lala Udhai
Bhide, Raoji Janardhan
Bhutt, Chhotelal Goverdhan
Bihari Lal
Birj Bihari Lal, Babu
Bisheshwar Nath, Lala
Biswas, Babu Anonda Mohan
Blackham, Lieut.-Colonel Robert James
Blackwood, John Ross
Blake, The Rev. William Henry
Blenkinsop, Edward Robert Kaye
Bolster, Miss Anna
Borrah, Balinarayan
Bose, Miss Kiroth
Bose, Miss Mona
Botting, W. E.
Bowen, Griffith
Brahmanand, Pundit
Brander, Mrs. Isabel
Bray, Lady
Bremner, Lt.-Col. Arthur Grant
Brock, Miss Lilian Winifred
Brough, The Rev. Anthony Watson
Browne, Charles Edward
Brown, Dr. Edith
Burt, Bryce Chudleigh
Cain, Mrs. Sarah
Caleb, Mrs. M.
Campbell, The Rev. Andrew
Campbell, Miss Kate
Campbell, Miss Susan
Campbell, Miss Mary Jane
Campbell, The Rev. Thomas Vincent
Carr, Miss Emma
Carr, Thomas
Cassels, Mrs. Laura Mary Elizabeth
Catherine, Sister
Cattell, Major Gilbert Landale
Cecilia, Sister Fannie
Chamberlain, The Rev. William Isaac
Chandler, The Rev. John Scudder
Chaudhuri, Purna Chundra
Chaudhuri, P. S. R.
Chirag Din, Seth
Chunilal Ghelabhai Shah
Chitale, Ganesh Krishna
Churchward, P. A.
Chye, Leong
Clancey, John Charles
Clark, Herbert George
Clerke, Honorary Major Louis Arthur Henry
Clutterbuck, Peter Henry
Coombs, George Oswald
Coombes, Josiah Waters
Correa, Miss Marie
Corthorn, Miss Alice
Corti, The Rev. Father Fanshi, S. J.
Cottle, Mrs. Adela
Cox, Mrs. E.
Coxon, Stanley William
Crow, Charles George
Cumming, James William Nicol
Cummings, The Rev. John Ernest
Cutting, Rev. William
Dadabhoy, Mrs. Jerbanoo
Dalrymple-Hay, Charles Vernon
Dann, Rev. George James
Das, Ram, Lala
Das, Mathura, Lala

Das, Niranjan
Datta, Dr. Dina Nath Pritha
Dawe, Miss Ellen
Dawson, Mrs. Charles Hutton
Deane, George Archibald
Deodhar, Gopal Krishna
Deoji, Hazi Ahmed, Khan Sahib
deKantzow, Mrs. Mary Aphrasia
Desmond, J.
De Wachter, Father Francis Xavier
Dewes, Lieut.-Colonel Frederick Joseph
Dexter, T.
Dharm Chand, Lala
Dilshad Begum
Dip Singh, Thakur
Dodson, Dr. E. I.
Douglas, The Rev. John
Dun, Maung Ne
Dundas, Charles Lawrence
Dunlop, Alexander Johnstone
Durjan Singh, Thakur
Dutta, Mehta Harnam
Duval, Mrs. Ethel Aldersey
Dwane, Mrs. Mary
Eagles, Thomas Cazaly
Eaglesome, George
Edgell, Lieut.-Colonel Edward Arnold
Elwes, Mrs. A.
Emanuel, Mrs.
Evans, The Rev. John Ceredig
Evans, Miss Josephine Annie
Faridoonji, Mrs. Hilla
Farrer, Miss Ellen Margaret
Farzand-i-Ahmad, Khan Bahadur, Kazi Saiyid
Ffrench, Lieut.-Colonel Thomas
Flashman, Thomas Charles
Fleming, James Francis
Fletcher, Miss
Forman, The Rev. Henry
Fox, Alfred Charles
Frances, Sister Jane
Fraser, Robert Thomson
Freynet, The Rev. Father Etienne
Fyson, Hugh
Gajjar, Mrs. Shivagauri
Galbibai, Baj
Gandhy, Mr. Pestonji Jamsetji
Garthwaite, Liston
George, Miss Jessie Eleanor
Gilman, Edward P. Reuben
Godfrey, Thomas Leonard
Goenka, Baijnath
Goldsmith, The Rev. Canon Malcolm George
Goodbody, Mrs.
Gorman, Patrick James
Goswami, Sri Sri Naradev Dakhinpat Adhikar
Govindal Lal, Lala
Gowardhandas, Chatrabhuj
Govind Lal, Lala
Grant, Lieut.-Colonel John Weymis
Grant, Mrs., *nee* Miss Lilian Blong
Grant, Miss Jean
Grant, Miss Maria Alice
Gray, Mrs. Hester
Gray, Commissary William David
Greany, Peter Mawe
Greenfield, Miss R.
Griessen, Albert Edward Pierre
Gulliford, The Rev. Henry
Gumbley, Mr. Douglas
Gune, Trimbak Raghunath
Gyi, Maung Pet
Haiyati Inabh Malik
Hanrahan, W. G.
Harrison, Henry
Harrison, Mrs. M. F.
Harrison, Robert Tullis
Hart, Miss Louisa
Harvey, Miss Rose
Hatch, Miss Sarah Isabella
Haworth, Major Lionel Berkeley Holt
Hayes, Miss Mary Lavinia
Henderson, Miss Agnes
Hickman, Mrs. A.
Hicks, Rev. G. E.
Higgins, Andrew Frank
Hill, Eliott
Hill, Henry Francis
Hoff, Sister, W. J. K.
Hoffman, The Rev. Father John, S.J.
Holbrooke, Major Bernard Frederick Roper
Holden, Major Hyla Napier
Holland, Dr. Henry Tristram
Homer, Charles John
Hope, Dr. Charles Henry Standish
Hopkyns, Mrs. E.
Hughes, Frank John
Hunter, Honorary Captain James
Hutchison, Dr. John
Ibrahim, Moulvi Muhammad
Ihsan Ali
Jackson, Mrs. K.
Jackson, Mrs. Emma
Jaijee Bai (Mrs. Petit)
Jainath, Atal Pandit
Jambusarvala, A. Hargovandas
Jivanandan
Joglekar, Rao Bahadur Ganesh Venkatesh
John, Rev. Brother
Johnston, Augustus Frederick
Johnstone, Mrs. Rosalie
Jones, The Rev. John Peter
Jones, The Rev. Robert
Jones, The Rev. John Pengwern
Joshi, Mr. Keshavlal Durgashankar
Joshi, N. M.
Joshi, Trimbak Waman
Joss, Miss F.
Joti Prasad, Lala
Judd, C. R.
Jung, Sher, Khan Bahadur
Jwala Prasad, Mrs.
Jwala Singh, Sirdar
Kalubava, Azam Kesarkhan
Kanow, Yasuf
Kapadia, Miss Motibai
Karve, Dhondo Keshav
Keene, Miss H.
Kelavkar, Miss Krishnabai
Kelly, Claude Cyril
Kelly, Miss Eleanor Sarah
Ker, Thomas
Kharshedji, Miss S. K.
Khujoorina, Nadirshah Nowrojee
Kidar Nath, Lala
King, Robert Stewart
Kirloskar, Lakshman Kashinath
Kitchin, Mrs. M.
Knollys, Major Robert Walter Edmond
Knox, Major Robert Welland
Kothewala, Mulla Yusuf Ali
Kreyer, Lieut.-Colonel Frederick August Christian
Kugler, Miss Anna Sarah
Kyaw, Maung

Lajpe Ram
Lang, John
Langhorne, Frederick James
Lankester, Dr. Arthur Colborne
Laughlin, Miss L. H. M.
Lawrence, Captain Henry Rundle
Lawrence, Henry Staveley
Leslie-Jones, Leycester Hudson
Lloyd, Miss Ellizabeth
Locke, Robert Henry
Low, Charles Ernest
Lund, George
Lynch, Miss C. M.
MacAlister, The Rev. G.
Mackenzie, Alexander McGregor
Mackenzie, Howard
Mackinnon, Miss Grace
Macleod, Lieut.-Colonel John Norman
Mackellar, Dr. Margaret
Macnaghten, Hon. Florence Mary
Macphail, The Rev. James Merry
Macphail, Miss Alexandrina Matilda
Macrae, The Rev. Alexander
Madan, Mr. Rustamji Hormasji
Maddox, Lieut.-Colonel Ralph Henry
Madeley, Mrs. E. M.
Mahadevi, Srimati
Mahommed Allanur Khan
Maiden, J. W.
Maitra Babu Bhuban Mohan
Mallik, Sashi Bhusan
Maracan, Esmail Kadir
Margaret Mary, Sister
Marie, Sister
Marler, The Rev. Frederick Lionel
Mary of St. Vincent, Sister
Mary, Sister Eleanor
Masani, Rustam Pestonji
Matthews, Rev. Father
McCowen, Oliver Hill
McDonald, Joseph James
McGregor, Duncan
McKenzie, Miss Allice Learmouth
Mead, Rev. Cecil Silas
Mehta, Vaikuntrai Lallubhai
Mill, Miss C. R.
Mitcheson, Miss
Mitra, Rajeswar
Mitter, Mrs.
Moens, Mrs. Agnese Swettenham
Mohammed Khan
Moitra, Akhoy Kumar
Moore, Nursing Sister Dora Louisa Truslove
Moore, Miss Eleanor Louisa
Morris, Major Robert Lee
Motilal, Seth of Piparia
Mount, Captain Alan Henry
Moxon, Miss Lais
Mozumdar, Jadu Nath
Mudali, Valappakkam Daivasigomoni Thandavaroyan
Mudaliar, Bangalore Perumal Annaswami
Muhammad Yusuf, Shams-Ul-Ulama, Khan Bahadur
Mukharji, Babu Jogendra Nath
Mukharji Babu Nagendra Nath
Muller, Miss Jenny
Murli Dhar
Murphy, Edwin Joseph
Nabi Baksh
Nag, Mrs. Sasi Mukhi
Naimullah, Mohamed
Naoum Abbo
Napier, Alan Bertram
Narain, Har
Narayan Pershad, Babu
Narayan Singh, Sardar
Nariman, Khan Bahadur Manekji Kharsedji
Narpat Singh, Babu
Nasrulla Khan, Mirza
Norris, Miss Margaret
O'Maung Po
O'Brien, Major Edward
O'Conor, Brian Edward
O'Hara, Miss Margaret
Old, Frank Shepherd
Orman, Honorary Captain Charles Henry
Orr, Adolphe Ernest
Orr, James Peter
Orr, Mrs. Amy
Outram, The Rev. A.
Owen, Captain Robert James
Owen, C. B.
Pal, Babu Barada Sundar
Palin, Major Randle Harry
Pandit, Vasudeo Ramkrishna
Parbati Bai, Mussammat
Park, The Rev. George W.
Parker, Miss Ada Emma
Parsons, Ronald
Patel, Barjorji Dorabji
Patel, Jeona
Pathak, Vithal Narayan
Pathak, Ram Sahai
Paterson, Miss Rachel
Patrick, Sister
Perroy, Rev. Father
Pershad, Pundit Thakur
Pennell (*nee* Sorabji), Mrs. Alice Maude
Peters, Lieut.-Colonel Charles Thomas
Peltigrew, The Rev. William
Phadke, V. K.
Phailbus, Miss Rose Margaret
Phelps, Mrs. Maude Marion
Pierce, Miss Ada Louise
Pillay, Chinnappa Singaravalu
Pinney, Major John Charles Digby
Pinto, Miss Preciosa
Plowden, Lt.-Col. Trevor Chichele
Powell, John
Prabhu, Anantrao Raghunath
Prasad, Capt. Tulsi of Nepal
Pribhdas Shevakram
Price, The Rev. Eustace Dickinson
Prideaux, Frank Winckworth Austice
Purshotamdas Thakurdas
Pyo, Maung Tet
Rai, Babu Ram Kinkar
Rai Chaudhuri, Parbati Sankar
Raikes, Mrs. Alice
Rait, Miss Helen Anna Macdonald
Raj Bahadur, Pandit
Rajendra Pal, Tika Rani
Ram, Mr. Bhagat
Ramchandra, Daji
Ramgopal, Mallani, Seth
Ram Singh, M.V.O.
Ranade, Mrs. Ramabai
Ranjit Singh
Rattan Chand
Rattansi Mulji
Raushan Lal
Ray, Harendra Nath
Ray, Babu Sarat Chandra
Raza Ali Khan, Sardar

Reed, Lady Lilian
Richardson, Mrs. Catherine Stuart
Rita, Stiffani Edward
Robarts, Captain Charles Stuart Hamilton
Robinson, James
Robinson, Lieut.-Colonel William Henry Banner
Rocke, Captain Cyril E. A. Spencer
Roe, Colonel Cyril Harcourt
Roe, Mrs. Edith Mary
Rukhmabai, Dr.
Rulach, Rev. George Bernard
Rustomji Faridoonji
Sadlier, A. W. Woodward
Sahai, Ram
Sahan Ram Kali
Sahay, Lala Deonath
Saint Monica, The Rev. Mother
Salkield, Tom
Samarth, Wasudeo Mahadeo
Samuels, Joseph
Savidge, Rev. Frederick William
Schultze, The Rev. Frederick Volkomor Paul
Scotland, Lieut.-Colonel David Wilson
Shah, Babu Lal Behari
Shah, Mohamed Kamal.
Shah, Mohammad Nawaz
Shah, Reverend Ahmad
Shamnath Rai Bahadur
Shaw, Mrs. Hawthorne
Sheard, Mr. E.
Sheore, Raghunath Balwant
Shircore, William
Shyam Rikh, Raja Francis Xavier
Shyam Sunder Lall
Simcox, Arthur Henry Addenbrooke
Simkins, Charles Wylkins
Simon, Sister M.
Sinclair, Reginald Leahy
Singh, Apji Dhul
Singh, Babu Harnath
Singh, Bhai Takht
Singh, Makkhan
Singh, Babu Ramdhari
Singh, Sitla Baksh
Singh, Subadar Sher
Singh, Risaldar Major, Hanwant
Sita Thiruvenkata Acharyar
Smith, Miss Ellen
Smith, The Rev. Frederick William Ambery
Smith, Mrs. Henry
Sohan Singh
Sommerville, The Rev. Dr. James
Sir Ram Kunwar, Thakurain
Starte, Oliver Harold Baptist
Steel, Alexander
Steele, The Rev. John Ferguson
Stephens, John Hewitt
Stephens, Mrs. Grace
Stevens, Mrs. (Ethel)
Stevenson, Surgeon-General Henry Wickham
Stewart, Major Hugh
Stewart, Mrs. Lilian Dorothea
Stewart, Thomas
St. Joseph, J. D.
Strip, Samuel Algernon
Stuart, Dr. (Miss) Gertrude
Sultan Ahmed Khan
Sunder Lal
Sundrabai, Bai
Surebhan Janji
Swain, Mrs. Walker
Swainson, Miss Florence
Swiss, Miss Emily Constance
Taleyarkhan, Mr. Manekshah Cawasha
Talib Mehdi Khan, Malik
Tambe, Dr. Gopal Rao Ramchandra
Tarafdar, Mr. S. K.
Tarapurwalla, Fardunji Kuvarji
Taylor, Rev. Alfred Prideaux
Taylor, Mrs. Florence Prideaux
Taylor, John Norman
Tha, Maung Po
Tha, Maung Shwe
Thein, Maung Po
Theobald, Miss
Thomas, Mrs. Mabel Fox
Thomas, Samuel Gilbert
Thompson, R. C.
Thomson, Robert Douglas
Thomssen, The Rev. G. Nicholas
Thorn, Miss Bertha
Thoy, Herbert Dominick
Timothy, Samuel
Tok, Maung Po
Tomkins, Lionel Linton
Tudball, Miss Emma
Turner, Mrs. Vera
Umar Khan, Malik Zorawar Khan
Vale, Mrs. K.
Vaughan-Stevens, Dudley Lewis
Vijayaraghava Acharyar
Visvesvaraya Mokshagundam
Wait, Robert William Hamilton
Wakefield, George Edward Campbell
Walayatullah, Khan Bahadur Hafiz Muhammad
Walewalker, P. Baburao
Waller, Frederick Chighton
Wanless, Dr. William James
Wares, Donald Horne
Webb-Ware, Mrs. Dorothy
Weighell, Miss Anna Jane
Western, Miss Mary Priscilla
Wildman, Miss Elizabeth Annie
Wilson, Mrs. E. R. B.
Wiseman, Honorary Captain Charles Sher
Woerner, Miss Lydia
Wood, The Rev. A.
Wyness, Mrs. Ada
Yerbury, Miss J.
Young, Dr. M. Y.
Zahur-ul-Husain, Muhammad

Indian Names and Titles.

There is a bewildering multiplicity of Indian titles, made all the more difficult inasmuch as there is a difference of nomenclature between the titles of Hindus and Mahomedans. Some titles are hereditary and represent ruling chiefs or those nominally such (and of these there are no less than some 620, whilst of the titles themselves some 200 are known); others are personal honours conferred on individuals by the Indian Government, and even then sometimes made hereditary. Yet again, there are numerous complimentary titles, or specifications of office, expressed in Hindu phrases, of which we have occasionally supplied the interpretations. It must be added that though *caste* is often figuring in the names it has nothing whatever to do with the titles. Amir, Khan, Mir, Sultan, Sri, &c., are confusingly used as both titles and names.

The order of rank is thus given by Sir R. Lethbridge in "The Golden Book of India."

Hindu—Maharaja Bahadur, Maharaja, Raja Bahadur, Raja, Rai Bahadur, Rai Saheb, Rai.

Mohammedan—Nizam, Nawab Bahadur, Nawab, Khan Bahadur, Khan Saheb, Khan.

Parsis and Bene-Israelites—Khan Bahadur, Khan Saheb.

Afsur—a corruption of the English "officer."

Ahluwalia—name of a princely family resident at the village of Ahlu, near Lahore.

Akhundzada—son of a Head Officer.

Alijah (Sindhi)—of exalted rank.

Ali Raja—Sea King (Laccadives).

Amir (corruptly *Emir*)—a Mohammedan Chief often also a personal name.

Asaf—a Minister.

Baba—lit. "father;" a respectful "Mr.:" Irish "Your Honour."

Babu—strictly a 5th or still younger son of a Raja, but often used of any son younger than the heir, whilst it has also grown into a term of address=Esquire. There are, however, one or two Rajas whose sons are known respectively as—1st, Kunwar; 2nd, Diwan; 3rd, Thakur; 4th, Lal; 5th, Babu.

Bahadur—lit. "brave" or "warrior:" a title used by both Hindus and Mohammedans, often bestowed by Government; added to other titles it increases their honour, but alone it designates an inferior ruler.

Bakhshi—a revenue officer or magistrate.

Begum or *Begam*—the feminine of "Nawab" combined in Bhopal as "Nawab Begum."

Besar—apparently a large land-owner.

Bhonsle—name of a Maratha dynasty.

Bhup—title of the ruler of Cooch Behar.

Bhugti—name of a Baluch tribe.

Chhatrapati—one of sufficient dignity to have an umbrella carried over him.

Dada—lit. "grandfather" (paternal); any venerable person.

Daula an *Daulat*—State; also one in office.

Deb—a Brahminical priestly title; taken from the name of a divinity.

Dhiraj—"Lord of the Lands:" added to "Raja," &c., it means "paramount."

Diwan—a Vizier or other First Minister to a native Chief, either Hindu or Mohammedan, and equal in rank with "Sardar," under which see other equivalents. The term is also used of a Council of State.

Elaya Raja—title given to the heir of the Maharaja of Travancore.

Farzand (with defining words added)—"favorite" or "beloved."

Fateh—"victory."

Fath Jeang—"Victorious in Battle" (a title of the Nizam).

Gaekwar (sometimes *Guicowar*)—title with "Maharaja" added of the ruler of Baroda. It was once a caste name and means "cowherd, *i.e.*, the protector of the sacred animal; but later on, in common with "Holkar" and "Sindhia," it came to be a dynastic appellation and consequently regarded as a title. Thus, a Prince becomes "Gaekwar" on succeeding to the estate of Baroda; "Holkar," to that of Indore; and "Sindhia," to that of Gwalior.

Hafiz—guardian.

Haji—one who has made pilgrimage to Mecca.

Hiera Lal—"diamond ruby."

Holkar—see "Gaekwar."

Jah—a term denoting dignity.

Jam (Sindhi or Baluch)—Chief.

Kazi—(better written *Qazi*)—a Mohammedan magistrate.

Khan—originally the ruler of a small Mohammedan State, now a nearly empty title though prized. It is very frequently used as a name, especially by Afghans and Pathans.

Khwaja—a Persian word for "master," sometimes a name.

Kunwar or *Kumar*—the heir of a Raja.

Lal—a younger son of a Raja (strictly a 4th son, but see under "Babu").

Lokendra or *Lokindra*—"Protector of the World," title of the Chiefs of Dholpur and Dattia.

Mahant—a feudal title borne by the heads of a Hindu religious body.

Maharaja—the highest of hereditary rulers among the Hindus, or else a personal distinction conferred by Government. It has several variations as under "Raja," with the addition of *Maharaj Rana*; its feminine is *Maharani* (*maha*=great).

Malik—master, proprietor.

Mian—title of the son of a Rajput Nawab resembling the Scottish "Master."

Mir—a leader, an inferior title which, like "Khan," has grown into a name. It is especially used by descendants of the Chiefs of Sind.

Mirza—if prefixed, "Mr." or "Esquire."

Mong, Moung, or *Maung* (Arakanese)—leader.

Moulvi or *Maulvi*—a learned man or teacher.

Mudaliyar or *Mud-liar*—a personal proper name, but implying "steward of the lands."

Mumtaz-ud-Daula—distinguished in the State (*Mulk*, in the country).

Munshi—president, or presiding official.

Myowun—"Mr."

Nawab—originally a Viceroy under the Moghal Government, now the regular leading title of a Mohammedan Prince, corresponding to "Maharaja" of the Hindus.

Nazim—a ruler (not to be confused with following).

Nizam—the title of the ruler of Hyderabad, the one Mohammedan Prince superior to Nawab.

Nono (Thibetan)—the ruler of Spitta.

Pandi or Pundi—a learned man.

Peshkup—manager or agent.

Prince—term used in English courtesy for "Shahzada," but specially conferred in the case of "Prince of Arcot" (called also "Armin-i-Arcot").

Raja—a Hindu Prince of exalted rank, but inferior to "Maharaja." The feminine is *Rani* (Princess or Queen), and it has the variations *Raj, Rana, Rao, Rai, Rawal, Rawat, Raikwar, Raikbar,* and *Raikat*. The form *Rai* is common in Bengal, *Rao* in S. & W. India.

Raj Rajeshwar—King of Kings.

Risaldar—commander of a troop of horses.

Saheb—the Native Hindu term used to or of a European ("Mr. Smith" would be mentioned as "Smith Saheb," and his wife "Smith Mem-Saheb," but in *addressing* it would be "Saheb," fem. "Saheba," without the name); occasionally appended to a title in the same way as "Bahadur," but inferior (=master). The unusual combination "Nawab Saheb" implies a mixed population of Hindus and Mohammedans.

Sahibzada—son of a person of consequence.

Said, Sayid, Saiyid, Sidi, Syed, Syud—various forms for a title adopted by those who claim direct male descent from Mohammed's grandson Husain.

Sardar (corrupted to *Sirdar*)—a leading Government official, either civil or military, even a Grand Vizier. Nearly all the Punjab Barons bear this title. It and "Diwan" are like in value and used by both Hindus and Mohammedans. So, but Mohammedans only, are "Wali," "Sultan," "Amir," "Mir," "Mirza," "Mian," and "Khan."

Sawai—a Hindu title implying a slight distinction (lit. one-fourth better than others).

Sawbwa (Burmese)—a Chief.

Shahzada—son of a King.

Shaikh or *Sheikh* (Arabic)—a Chief.

Shams-ul-Ulama—a Mohammedan title denoting "learned."

Shamshir-Jang—"Sword of Battle" (a title of the Maharaja of Travancore).

Sidi—a variation of "Said."

Sindhia—see under "Gaekwar."

Sri or *Shri*—lit. fortune, beauty: a Sanscrit term used by Hindus in speaking of a person much respected (never addressed *to* him; nearly="Esquire"); used also of divinities. The two forms of spelling are occasioned by the intermediate sound of the *s* (that of *s* in the German *Stadt*).

Subadar—Governor of a province.

Sultan—like "Sardar."

Syed, Syud—more variations of "Said."

Talukdar—an Oudh landlord.

Talpur—the name of a dynasty in Sind.

Thakur—a Hindu term equivalent to "Bahadur," whether as affix or alone.

Tumandar—a Persian word denoting some office

Umara—term implying the Nobles collectively.

Wali—like "Sardar." The Governor of Khelat is so termed, whilst the Chiefs of Cabul are both "Wali" and "Mir."

Zemindar or *Zamindar*—a landowner; orig. a Mohammedan collector of revenue.

Distinctive Badges.—An announcement was made at the Coronation Durbar in 1911, that a distinctive badge should be granted to present holders and future recipients of the titles of 'Diwan Bahadur', 'Sardar Bahadur', 'Khan Bahadur', 'Rai Bahadur', 'Rao Bahadur', 'Khan Sahib', Rai Sahib' and 'Rao Sahib'. Subsequently the following regulations in respect of these decorations were issued:—(1) The decoration to be worn by the holders of the titles above mentioned shall be a badge or medallion bearing the King's effigy crowned and the name of the title, both to be executed on a plaque or shield surrounded by a five-pointed star surmounted by the Imperial Crown, the plaque or shield being of silver gilt for the titles of Diwan, Sardar, Khan, Rai and Rao Bahadur, and of silver for the titles of Khan, Rai, and Rao Sahib. (2) The badge shall be worn suspended round the neck by a ribbon of one inch and a half in width, which for the titles of Diwan and Sardar Bahadur shall be light blue with a dark blue border, for the titles of Khan, Rai and Rao Bahadur light red with a dark red border, and for the titles of Khan, Rai and Rao Sahib dark blue with light blue border.

A Press Note issued in November, 1914, state:—The Government of India have recently had under consideration the question of the position in which **miniatures** of Indian titles should be worn, and have decided that they should be worn on the left breast fastened by a brooch, and not suspended round the neck by a ribbon as prescribed in the case of the Badge itself. When the miniatures are worn in conjunction with other decorations, they should be placed immediately after the Kaiser-i-Hind Medal.

Indian Distinguished Service Medal.—This medal was instituted on June 28th, 1907, by an Army Order published in Simla as a reward for both commissioned and non-commissioned officers of the regular and other forces in India. It bears on the obverse the bust of King Edward VII, and on the reverse a laurel wreath encircling the words For Distinguished Service. The

medal, 1⅜ inches in diameter, is ordered to be worn immediately to the right of all war medals suspended by a red ribbon 1¼ in. wide, with blue edges ¼ in. wide. This medal may be conferred by the Viceroy of India.

Indian Order of Merit.—This reward of valour was instituted by the H. E. I. Co. in 1837, to reward personal bravery without any reference to length of service or good conduct. It is divided into three classes and is awarded to native officers and men for distinguished conduct in the field. On the advancement from one class to another the star is surrendered to the Government, and the superior class substituted, but in the event of the death of the recipient his relatives retain the decoration. The order carries with it an increase of one-third in the pay of the recipient, and in the event of his death the allowance is continued to his widow for three years. The First Class consists of a star of eight points, 1⅝ in. in diameter, having in the centre a ground of dark blue enamel bearing crossed swords in gold, within a gold circle, and the inscription Reward of Valour, the whole being surmounted by two wreaths of laurel in gold. The Second Class star is of silver, with the wreaths of laurel in gold; and the Third Class entirely of silver. The decoration is suspended from a simple loop and bar from a dark-blue ribbon 1¼ in. in width with red edges, bearing a gold or silver buckle according to class.

Order of British India.—This order was instituted at the same time as the Order of Merit, to reward native commissioned officers for long and faithful service in the Indian Army. Since 1878, however, any person European or native, holding a commission in a native regiment, became eligible for admission to the Order without reference to creed or colour. The First Class consists of a gold eight-pointed radiated star 1½ in. in diameter. The centre is occupied by a lion statant gardant upon a ground of light-blue enamel, within a dark-blue band inscribed Order of British India, and encircled by two laurel wreaths of gold. A gold loop and ring are attached to the crown for suspension from a broad ornamental band $\frac{9}{16}$ in. in diameter, through which the ribbon, once blue, now red, is passed for suspension from the neck. The Second Class is $1\frac{7}{16}$ in. in diameter with dark-blue enamelled centre: there is no crown on this class, and the suspender is formed of an ornamental gold loop. The reverse is plain in both classes. The First Class carries with it the title Sirdar Bahadur, and an additional allowance of two rupees a day: and the Second the title of Bahadur, and an extra allowance of one rupee per day.

Indian Meritorious Service Medal.—This was instituted on July 27th, 1888, and on receipt of the medal the order states "a non-commissioned officer must surrender his Long Service and Good Conduct medal": but on being promoted to a commission he may retain the M. S. medal, but the annuity attached to it will cease. On the obverse is the diademed bust of Queen Victoria facing left, with a veil falling over the crown behind, encircled by the legend Victoria Kaisar-i-Hind. On the reverse is a wreath of lotus leaves enclosing a wreath of palm tied at the base, having a star beneath; between the two wreaths is the inscription for meritorious service. Within the palm wreath is the word India. The medal, 1⅜ in. in diameter, is suspended from a scroll by means of a red ribbon 1¼ in. wide. The medals issued during the reigns of Queen Victoria's successors bear on the obverse their bust in profile with the legend altered to EDWARDVS or GEORGIVS.

Laws and the Administration of Justice.

The indigenous law of India is personal and divisible with reference to the two great classes of the population, Hindu and Mahomedan. Both systems claim divine origin and are inextricably interwoven with religion, and each exists in combination with a law based on custom. At first the tendency of the English was to make their law public and territorial, and on the establishment of the Supreme Court at Calcutta in 1773 and the advent of English lawyers as judges, they proceeded to apply it to Europeans and Indians alike. This error was rectified by the Declaratory Act of 1780, by which Parliament declared that as against a Hindu the Hindu law and usage, and as against a Mahomedan the laws and customs of Islam should be applied. The rules of the Shastras and the Koran have been in some cases altered and relaxed. Instances can be found in the Bengal Sati Regulation Act of 1829; the Indian Slavery Act, 1843; the Caste Disabilities Removal Act of 1850; the Hindu Widows' Remarriage Act, 1856; and other Acts and Codes. To quote the Imperial Gazetteer, "A certain number of the older English statutes and the English common law are to a limited extent still in force in the Presidency Towns as applicable to Europeans, while much of the old Hindu and Mahomedan law is everywhere personal to their native fellow subjects; but apart from these, and from the customary law, which is as far as possible recognised by the Courts, the law of British India is the creation of statutory enactments made for it either at Westminster or by the authorities in India to whom the necessary law-giving functions have from time to time been delegated."

Codification.

Before the transfer of India to the Crown the law was in a state of great confusion. Sir Henry Cunningham described it as "hopelessly unwieldy, entangled and confusing." The first steps toward general codification were taken in 1833, when a Commission was appointed, of which Lord Macaulay was the moving spirit, to prepare a penal code. Twenty-two years elapsed before it became law, during which period it underwent revision from his successors in the Law Membership, and especially by Sir Barnes Peacock, the last Chief Justice of the Supreme Court of Calcutta. The Penal Code, which became law in 1860, was followed in 1861 by a Code of Criminal Procedure. Substantially the whole criminal law of British India is contained in these two Codes. One of the most eminent lawyers who ever came to India, Sir James Stephen, said "The Indian penal code may be described as the criminal law of England freed from all technicalities and superfluities, systematically arranged and modified in some few particulars (they are surprisingly few) to suit the circumstances of British India. It is practically impossible to misunderstand the code." The rules of Civil Procedure have been embodied in the Code of Civil Procedure. The Indian Penal Code has from time to time been amended. The Code of Civil Procedure was remodelled in 1908 and the Code of Criminal Procedure in 1898. These Codes are now in force.

European British Subjects.

Whilst the substantive criminal law is the same for all classes, certain distinctions of procedure have always been maintained in regard to criminal charges against European British subjects. Until 1872 European British subjects could only be tried or punished by one of the High Courts. It was then enacted that European British subjects should be liable to be tried for any offences by magistrates of the highest class, who were also justices of the peace, and by judges of the Sessions Courts; but it was necessary in both cases that the magistrate or judge should himself be a European British subject. In 1883 the Government of India announced that they had decided "to settle the question of jurisdiction over European subjects in such a way as to remove from the code at once and completely every judicial disqualification which is based merely on race distinctions." This decision, embodied in the Ilbert Bill, aroused a storm of indignation which is still remembered. The controversy ended in a compromise which is thus summarised by Sir John Strachey ("India"). "The controversy ended with the virtual, though not avowed, abandonment of the measure proposed by the Government. Act III of 1884, by which the law previously in force was amended, cannot be said to have diminished the privileges of European British subjects charged with offences, and it left their position as exceptional as before. The general disqualification of native judges and magistrates remains; but if a native of India be appointed to the post of district magistrate or sessions judge, his powers in regard to jurisdiction over European British subjects are the same as those of an Englishman holding the same office. This provision however is subject to the condition that every European British subject brought for trial before the district magistrate or sessions judge has the right, however trivial be the charge, to claim to be tried by a jury of which not less than half the number shall be Europeans or Americans.....Whilst this change was made in the powers of district magistrates, the law in regard to other magistrates remained unaltered." Since 1836 no distinctions of race have been recognised in the civil courts throughout India.

High Courts.

The highest legal tribunals in India are the High Courts of Judicature. These were constituted by the Indian High Courts Act of 1861 for Bengal, Bombay and Madras, and later for the United Provinces, superseding the old supreme and Sudder Courts. The Judges are appointed by the Crown; they hold office during the pleasure of the Sovereign; at least one-third of their number are barristers, one-third are recruited from the judicial branch of the Indian Civil Service, the remaining places being available for the appointment of Indian lawyers. Trial by jury is the rule in original criminal cases before the High Courts, but juries are never employed in civil suits in India.

For other parts of India High Courts have been formed under other names, the chief

difference being that they derive their authority from the Government of India, not from Parliament. In the Punjab and Burma there are Chief Courts, with three or more judges; in the other provinces the chief appellate authority is an officer called the Judicial Commissioner. In Sind the Judicial Commissioner is termed Judge of the Sudder Court and has two colleagues.

The High Courts are the Courts of appeal from the superior courts in the districts, criminal and civil, and their decisions are final, except in cases in which an appeal lies to His Majesty in Council and is heard by the Judicial Committee of the Privy Council in England. The High Courts exercise supervision over all the subordinate courts. Returns are regularly sent to them at short intervals and the High Courts are able, by examining the returns, by sending for proceedings, and by calling for explanations, as well as from the cases that come before them in appeal, to keep themselves to some extent acquainted with the manner in which the courts generally are discharging their duties.

Lower Courts.

The Code of Criminal Procedure provides for the constitution of inferior criminal courts styled courts of session and courts of magistrates. Every province, outside the Presidency towns, is divided into sessions divisions, consisting of one or more districts, and every sessions division has a court of session and a sessions judge, with assistance if need be. These stationary sessions courts take the place of the English Assizes, and are competent to try all accused persons duly committed, and to inflict any punishment authorised by law, but sentences of death are subject to confirmation by the highest court of criminal appeal in the province. Magistrates' courts are of three classes with descending powers. Provision is made and largely utilised in the towns, for the appointment of honorary magistrates; in the Presidency towns Presidency magistrates deal with magisterial cases and benches of Justices of the Peace or honorary magistrates dispose of the less important cases.

Trials before courts of session are either with assessors or juries. Assessors assist, but do not bind the judge by their opinions; on juries the opinion of the majority prevails if accepted by the presiding Judge. The Indian law allows considerable latitude of appeal. The prerogative of mercy is exercised by the Governor-General-in-Council and the Local Government concerned without prejudice to the superior power of the Crown.

The constitution and jurisdiction of the inferior civil courts varies. Broadly speaking, one district and sessions judge is appointed for each district: as District Judge he presides in its principal civil court of original jurisdiction; his functions as Sessions Judge have been described. For these posts members of the Indian Civil Service are mainly selected though some appointments are made from the Provincial Service. Next come the Subordinate Judges and Munsiffs, the extent of whose original jurisdiction varies in different parts of India. The civil courts, below the grade of District Judge, are almost invariably presided over by Indians. There are in addition a number of Courts of Small Causes, with jurisdiction to try money suits up to Rs. 500. In the Presidency Towns, where the Chartered High Courts have original jurisdiction, Small Cause Courts dispose of money suits up to Rs. 2,000. As Insolvency Courts the chartered High Courts of Calcutta, Bombay and Madras have jurisdiction in the Presidency towns. In the mofussil similar powers were conferred on the District Courts by the Insolvency Act of 1906.

Coroners are appointed only for the Presidency Towns of Calcutta and Bombay. Elsewhere their duties are discharged by the ordinary staff of magistrates and police officers unaided by jurors.

Legal Practitioners.

Legal practitioners in India are divided into Barristers-at-Law, Advocates of the High Court; Vakils and Attorneys (Solicitors) of High Courts, and Pleaders, Mukhtiars and revenue agents. Barristers and Advocates are admitted by each High Court to practise in it and its subordinate courts; and they alone are admitted to practise on the original side of some of the chartereb High Courts. Vakils are persons duly qualified who are admitted to practise on the appellate side of the chartered High Courts and in the Courts subordinate to the High Courts. Attorneys are required to qualify before admission to practise in much the same way as in England. The rule that a solicitor must instruct counsel prevails only on the original side of certain of the High Courts. Pleaders practise in the subordinate courts in accordance with rules framed by the High Courts.

Organisation of the Bar.

At Calcutta, Madras, and Bombay there is a Bar Committee presided over, *ex officio*, by the Advocate-General. This body is elected by the barristers practising in each High Court, and its functions are to watch the interests of the Bar and to regulate its etiquette. At Allahabad, Lahore, Nagpore, and Rangoon a similar Bar Committee exists, but the electorate is extended to include the vakils or native pleaders, and the president is either the senior practising member of the Bar or the Government Advocate. In the larger Districts and Sessions Courts, an organisation representing the Bar is usually to be found, and in the subordinate Courts, including the Revenue Courts, similar machinery is generally in use. Pending an opportunity of detailed inquiries in India, these general descriptions must suffice.

Composition of the Bar.

A considerable change is occurring in the composition of the Indian Bar. The following extract from an informing article in the *Times* (May 25, 1914) indicates the character and incidence of this development: "During the last forty years, a striking change has taken place in the professional class. The bulk of practice has largely passed from British to Indian hands, while, at the same time, the profession has grown to an enormous extent. One typicalillustration may be quoted. Attached to the Bombay High Court in 1871 there

were 38 solicitors, of whom 10 were Indian and 28 English, and 24 advocates, of whom 7 were Indian and 17 English. In 1911, attached to the same High Court, there were 150 solicitors, of whom more than 130 were Indian and the remainder English, and 250 advocates, of whom 16 only were English and the remainder Indian."

Law Officers.

The Government of India has its own law colleague in the Legal Member of Council. All Government measures are drafted in this department. Outside the Council the principal law officer of the Government of India is the Advocate-General of Bengal, who is appointed by the Crown, is the leader of the local Bar, and is always nominated a member of the Provincial Legislative Council. In Calcutta he is assisted by the Standing Counsel and the Government Solicitor. There are Advocates-General and Government Solicitors for Bombay and Madras, and in Bombay there is attached to the Secretariat a Legal Remembrancer and an Assistant Legal Remembrancer, drawn from the Judicial Branch of the Indian Civil Service. The Government of Bengal consults the Bengal Advocate-General, the Standing Counsel and the Government Solicitor, and has besides a Legal Remembrancer (a Civil Servant) and a Deputy Legal Remembrancer (a practising barrister); the United Provinces are equipped with a civilian Legal Remembrancer and professional lawyers as Government Advocate and Assistant Government Advocate; the Punjab has a Legal Remembrancer, Government Advocate and a Junior Government Advocate; and Burma a Government Advocate, besides a Secretary to the Local Legislative Council.

Sheriffs are attached to the High Courts of Calcutta, Madras and Bombay. They are appointed by Government, selected from non-officials of standing, the detailed work being done by deputy sheriffs, who are officers of the Court.

Law Reports.

The Indian Law Reports are published in four series—Calcutta, Madras, Bombay, and Allahabad, under the authority of the Governor-General in Council. They contain cases determined by the High Court and by the Judicial Committee on appeal from the particular High Court. These appeals raise questions of very great importance, and the Council of Law Reporting for England and Wales show their appreciation by printing the Indian Appeals in a separate volume, and have also compiled a digest of Indian Appeals covering the period 1874-1893. The other Provinces and States have series of reports issued under the authority either of the Judiciary or the State.

Legislative Power.

The supreme power of Parliament to legislate for the whole of India cannot be questioned. In practice, however, this power is little used, there being a majority of officials on the Imperial Legislative Council—a majority deliberately reserved in the India Councils Act of 1909—the Secretary of State is able to impose his will on the Government of India and to secure the passage of any measure he may frame, regardless of the opinion of the Indian authorities. Legislative Councils have been established both for the whole of India and for the principal provinces. Their constitution and functions are fully described in detailing the powers of the Imperial and Provincial Councils (q. v.). To meet emergencies the Governor-General is vested with the power of issuing ordinances, having the same force as Acts of the Legislature, but they can remain in force for only six months. The power is very little used. The Governor-General-in-Council is also empowered to make regulations, having all the cogency of Acts, for the more backward parts of the country, the object being to bar the operation of the general law and permit the application of certain enactments only.

Bengal Judicial Department.

Sanderson, Sir Lancelot	Chief Justice.
Teunon, The Hon'ble Mr. William, I.C.S.	Puisne Judge.
Woodroffe, The Hon'ble Sir John George, M.A., Bar.-at-Law.	Ditto.
Mukharji, The Hon'ble Sir Ashutosh, Kt., C.S.I., M.A., D.L.	Ditto.
Richardson, The Hon'ble Mr. Thomas William, I.C.S.; Bar.-at-Law.	Ditto.
Walmsley, The Hon'ble Mr. Hugh, I.C.S.	Ditto.
Chitty, The Hon'ble Sir Charles William, Bar.-at-Law.	Ditto.
Fletcher, The Hon'ble Mr. Ernest Edward, Bar.-at-Law	Ditto.
Greaves, The Hon'ble Mr. William, Ewart	Ditto
Syed Shamsul-Huda, Hon'ble Nawab Sir, K.C.I.E. ..	Ditto.
Chatarji, The Hon'ble Mr. Nalini Ranjan, M.A.; B.L. ..	Ditto.
Chaudhuri, The Hon. Sir Asutosh, Bar.-at-Law ..	Ditto.
Newbould, The Hon'ble Mr. B. B.	Ditto.
Beachcroft, The Hon'ble Mr. Charles Porten, I.C.S. ..	Ditto.
Smith, The Hon'ble Mr. Maurice, I.C.S.	Ditto. (Officiating
Panton, The Hon'ble Mr. Edward Brooks Henderson, I.C.S.	Ditto. (do.)

Bengal Judicial Department—*contd.*

Gibbons, The Hon'ble Mr. Thomas Clarke Pilling, K.C.	Advocate-General.
Das, Satish Ranjan	Standing Counsel.
Kesteven, The Hon'ble Mr. Charles Henry	Government Solicitor.
Panton, The Hon. Mr. E. B. H.	Superintendent and Remembrancer of Legal Affairs.
Orr, John Williams, Bar.-at-Law	Deputy Superintendent and Remembrancer of Legal Affairs.
Ram Charan Mitra	Senior Government Pleader.
Hume, J. T.	Public Prosecutor, Calcutta
Hechle, James Herbert	Registrar, Keeper of Records, Taxing Officer, Accountant-General, and Sealer, etc., Original Jurisdiction.
Remfry, Maurice	Registrar in Insolvency, Original Side.
Nalini Mohan Chatarji, Bar.-at-Law	Master and Official Referee.
Ryper, George	Dy. Registrar.
Bonnaud, William Augustus, Bar.-at-Law	Clerk of the Crown for Crimina lSessions.
Kirkham, Joseph Alfred	Secretary to the Chief Justice and Head Clerk, Decree Department.
Edgley, Norman George Armstrong, I.C.S.	Registrar and Taxing Officer, Appellate Jurisdiction.
Counsell, Frank Bertram	Deputy Registrar.
Paulit, Peter Sydenham	Assistant Registrar.
Grey, Charles Edward, Bar.-at-Law	Administrator-General and Official Trustee.
Bonnerjee, K. K. Shelly, Bar.-at-Law	Official Receiver, sub. *pro tem.*
Dobbin, F. K., Bar.-at-Law	Coroner of Calcutta.
Falkner, George McDonald	Official Assignee.
Bose, B.D., Bar.-at-Law	Editor of Law Reports.

Bombay Judicial Department.

Scott, The Hon'ble Sir Basil, Kt., M.A., Bar.-at-Law ..	Chief Justice.
Shah, The Hon'ble Mr. Lallubhai Asharam, M.A., LL.B.	Puisne Judge.
Marten, The Hon. Mr. A. B.	Ditto.
Beaman, The Hon'ble Sir Frank Clement Offley, I.C.S...	Ditto.
Heaton, The Hon'ble Sir Joseph John, I.C.S.	Ditto.
Hayward, The Hon'ble Mr. Maurice Henry Weston, L.L.B.	Ditto.
McLeod, The Hon'ble Mr. Norman Cranstoun, B.A.; Bar.-at-Law.	Ditto. (On furlough).
Abdeali Muhammadali Kazlji, The Hon. Mr.	Ditto. (Officiating).
Strangman, the Hon'ble Mr. T. J.	Advocate-General.
French, George Douglas	Remembrancer of Legal Affairs.
Milne, Robert Blair, M.A., I.C.S.	Assistant Remembrancer of Legal Affairs.
Nicholson, Eustace Ferrers	Government Solicitor and Public Prosecutor.
Campbell, Henry.	Clerk of the Crown.
Weldon, Walton Langford, Bar.-at-Law.	Reporter to the High Court.
Slater, John Sanders, B.A., Bar.-at-Law..	Administrator-General and Official Trustee.
Phirozshah Behramji Malbari, Bar.-at-Law	Officiating Prothonotary, Testamentary and Admiralty Registrar.
Hirjibhai Hormasji Wadia, M.A.	Master and Registrar in Equity and Commissioner for taking Accounts and Local Investigations, and Taxing Officer.
Mahomedbhoy Hajibhoy Lalji	Sheriff.
Allison, Frederick William, B.A., I.C.S.	Registrar, Appellate Side.

Bombay Judicial Department—*contd.*

Nasarwanji Dinshahji Gharda, B.A., LL.B.	Deputy Registrar and Sealer, Appellate Side.
King, A. R.	Acting Coroner.
COURT OF THE JUDICIAL COMMISSIONER OF SIND.	
Pratt, Edward Millard, I.C.S.	Judicial Commissioner.
Crouch, Henry Newton, LL.B., Bar.-at-Law	Additional Judicial Commissioner. (On combined leave.)
Fawcett, Charles Gordon Hill, I.C.S.	Additional Judicial Commissioner.
Kemp, Norman Wright	Acting Additional Judicial Commissioner.

Madras Judicial Department.

Wallis, The Hon'ble Sir John Edward Power, Kt., M.A., Bar.-at-Law.	Chief Justice.
Abdur Rahim, The Hon'ble Mr., M.A., Bar.-at-Law ..	Puisne Judge.
Oldfield, The Hon'ble Mr. Francis Du Pre, I.C.S. ..	Ditto.
Spencer, The Hon'ble Mr. Charles Gordon, I.C.S. ..	Ditto.
Trotter, The Hon'ble Mr. Victor Murray Coults ..	Ditto.
Seshagiri Ayyar, The Hon. Mr. T. V., B. A., B. L. ..	Ditto.
Sadasiva Ayyar, The Hon'ble Diwan Bahadur T. ..	Ditto.
Ayling, The Hon'ble Sir William Bock, I.C.S.	Ditto.
Bakewell, The Hon'ble Mr. James Herbert, LL.B., Bar.-at-Law.	Ditto. (On furlough.)
Phillips, The Hon. Mr. William Watkin I.C.S... ..	Ditto.
Kumarswami Shastri, The Hon'ble Diwan Bahadur C. V.	Officiating Judge. (Additional).
Napier. The Hon. Mr. Charles Frederick	Ditto. (do.)
Srinivasa Ayyangar, The Hon. Mr. S., B.A., B.L. ..	Advocate-General.
Brightwell, Henry	Government Solicitor.
Ramesam Pantulu	Acting Government Pleader.
Osborne, E.R.	Acting Public Prosecutor.
Grant, P. R., Bar.-at-Law	Senior Law Reporter.
Odgers, The Hon'ble Mr. C. E., M.A., Bar.-at-Law ..	Administrator-General and Official Trustee.
Mackay. Charles Gordon, I.C.S.	Registrar.
Adam, John Collyer, M.A.	Crown Prosecutor.

Assam Judicial Department.

Abdul Majid, The Hon. Mr., B.A., LL.B., Bar.-at-Law .	Judge and Superintendent and Remembrancer of Legal Affairs, Shillong (On leave).
Graham, John Fuller	Officiating.
Mellor, The Hon. Mr. Arthur	Judge, Assam Valley Districts, Gauhati.
Liddell, Henry Crawford	District and Sessions Judge, Sylhet and Cachar.
Purnachandra Basu	Additional do. do.
Hogg, Gilbert Pitcavin	Additional District and Sessions Judge, A. V. Districts.

Bihar and Orissa Judicial Department.

Miller, The Hon. Sir Thomas Frederick Dawson ..	Chief Justice.
Roe, The Hon. Mr. Francis Reginald, I.C.S. ..	Puisne Judge.
Atkinson, The Hon'ble Mr. Cecil, K.C.	Ditto.
Jwala Prashad, The Hon'ble Mr.	Ditto.
Ali Imam, The Hon'ble Sir Sayyid	Ditto.
Chapman, The Hon. Mr. Edmund Pelly, I.C.S.	Ditto. (On furlough.)
Mullick, The Hon'ble Mr. Basanta Kumar, I.C.S. ..	Ditto
Thornhill, The Hon. Dr. Thomas	Ditto. (Acting.)
Sultan Ahmad, Bar.-at-Law	Government Advocate.
Adami, The Hon'ble Mr., K.C.	Superintendent and Remembrancer of Legal Affairs.
Coutts, William Strachan, I.C.S.	Registrar.

Burma Judicial Department.

Twomey, The Hon'ble Sir Daniel Harold Ryan, I.C.S., Bar.-at-Law	Chief Judge, Chief Court, Lower Burma (On leave).
Ormond, The Hon'ble Mr. Ernest William, B.A., Bar.-at-Law.	Officiating Chief Judge.
Robinson, The Hon'ble Mr. Sydney Maddock, Bar.-at-Law.	Judge. (On leave.)
Maung Kin	Do.
Rigg, The Hon. Mr. Arthur Edmund, B.A., I.C.S. ..	Do.

Burma Judicial Department—*contd.*

Young, The Hon'ble Mr. Charles Philip Radford, B.A., Bar.-at-Law.	Officiating Judge.
Saunders, Leslie Harry, I.C.S.	Judicial Commissioner, Upper Burma.
Sen, Purna Chundra, Bar.-at-Law	Administrator-General, Official Trustee, Official Assignee and Receiver, Rangoon. (On leave).
Sen, Surendra Nath, Bar.-at-Law	Officiating do..
Christopher, S. A., Bar.-at-Law	Government Prosecutor, Rangoon.
Darwood, Arthur John, Bar.-at-Law	Ditto. Moulmein.
Millar, Edward	Registrar, Court of Judicial Commissioner, Upper Burma.

Central Provinces, Judicial Department.

Drake Brockman, Sir H. V., M.A., LL.M., Bar.-at-Law, I.C.S.	Judicial Commissioner.
Batten, J. K., I.C.S.	First Additional Judicial Commissioner.
Hallifax, H. F., I.C.S.	Second Additional Judicial Commissioner. (On Military duty.)
Prideaux, Frank Winckworth Austin, O.B.E.	(Ditto.) Provisional.
Jackson, Robert John	Registrar.
Parande, K. G.	Deputy Registrar.

N.-W. Frontier Province Judicial Department.

Barton, W. P., C.I.E., I.C.S.	Judicial Commissioner.
Muhammad Akbar Khan	Registrar.

Punjab Judicial Department.

Rattigan, The Hon'ble Sir Henry Adolphus Byden, B.A., Bar.-at-Law.	Chief Judge.
Smith, The Hon'ble Mr. H. Scott, I.C.S.	Judge.
Chevis, The Hon'ble Mr. William, I.C.S.	Do. (On leave).
Shadi Lal, The Hon'ble Rai Bahadur, Bar.-at-Law	Do.
Le Rossignol, The Hon. Mr. Walter Aubin, I.C.S. ..	Officiating Judge.
Broadway, The Hon. Mr. Alan Brice, Bar.-at-Law ..	First Temporary Additional Judge.
Wilberforce, The Hon. Mr. Samuel, B.A.	Second. Do. do.
Gracey, S. W., B.A., I.C.S.	Legal Remembrancer.
Petman, Charles Bevan, B.A., Bar.-at-Law	Government Advocate.
Ferguson, John Alexander, M.A., I.C.S.	Registrar.
Herbert, H. A.	Assistant Legal Remembrancer and Administrator-General and Official Trustee.

United Provinces, Judicial Department.

Richards, The Hon'ble Sir Henry George, Kt., Bar.-at-Law, K.C.	Chief Justice. (On furlough).
Knox, The Hon'ble Sir George Edward, Kt., LL.D., I.C.S.	Officiating Chief Justice.
Banarji, The Hon'ble Sir Pramada Charan, Kt., B.A., B.L.	Puisne Judge. (On privilege leave).
Piggott, The Hon'ble Mr. Theodore Caro, I.C.S. ..	Ditto.
Tudball, The Hon'ble Mr. William, I.C.S.	Ditto.
Walsh, The Hon. Mr. Cecil, Bar-at-Law, M.A. ..	Ditto.
Rafiq, The Hon'ble Mr. Muhammad, Bar.-at-Law ..	Ditto. (On leave).
Abdur Rauf, The Hon. Mr. Saiyid Mohammed, Khan Bahadur.	Ditto. (Officiating).
Ryves, The Hon. Mr. Alfred Edward, B.A., Bar.-at-Law.	Ditto. (do.).
Johnson, John Nesbitt Gordon, I.C.S.	Registrar.
Lyle, The Hon. Mr. David Rauken, I.C.S.	Officiating Legal Remembrancer.
Porter, Wilfred King, Bar.-at-Law	Law Reporter and Secretary, Legislative Council.
Lalit Mohan Banarji	Government Pleader.
Wallach, W.	Government Advocate.
COURT OF JUDICIAL COMMISSIONER OF OUDH—LUCKNOW.	
Lindsay, Benjamin, I.C.S.	Judicial Commissioner. (On special duty).
Stuart, Louis, I.C.S.	First Additional Judicial Commissioner, Officiating Judicial Commissioner.
Rai Kanhaiya Lal, Bahadur	Second Additional Judicial Commissioner. Officiating First Additional Judicial Commissioner.
Daniels, Sidney Reginald, I.C.S.	Officiating Second Additional Judicial Commissioner.
Bordeux, C. H., Bar.-at-Law	Temporary Registrar.
Nagendra Nath Ghosal	Government Pleader.

Number and Value of Civil Suits Instituted.

Administrations.	Number of Suits Instituted.							Number of Suits the value of which cannot be estimated in money.	Total Number of Suits Instituted.	Total Value of Suits.
	Value not exceeding Rs. 10.	Value Rs. 10 to Rs. 50.	Value Rs. 50 to Rs. 100.	Value Rs. 100 to Rs. 500.	Value Rs. 500 to Rs.1,000.	Value Rs. 1,000 to Rs.5,000.	Value above Rs.5,000.			£
Bengal	95,061	293,349	125,489	129,971	11,954	6,958	1,246	841	664,869	6,529,982
Bihar and Orissa	34,665	72,842	28,736	32,310	4,001	3,175	764	122	176,615	4,175,120
United Provinces	16,322	82,576	51,572	49,966	6,346	5,288	1,190	38	213,298	5,766,281
Punjab	22,279	71,022	45,731	47,763	7,251	4,165	558	397	199,166	2,366,177
Delhi	542	2,173	1,372	1,782	352	348	76	14	6,659	207,772
North-West Frontier Province	3,828	11,149	6,313	6,363	782	424	51	16	28,926	309,846
Burma	3,642	22,517	15,819	24,069	2,672	1,898	352	1,427	72,396	1,505,919
Central Provinces and Berar	8,243	41,360	25,391	28,935	3,736	2,480	356	1	110,502	1,454,388
Assam	4,122	19,091	8,888	9,352	680	334	49	127	42,643	311,063
Ajmer-Merwara	1,703	4,073	1,802	1,260	78	72	9	5	9,002	51,980
Coorg	230	1,384	694	436	33	20	7	2	2,806	29,802
Madras	104,953	216,667	85,928	102,956	12,565	8,271	1,132	770	533,242	5,208,730
Bombay	13,279	60,781	33,696	41,078	5,918	4,439	962	2,264	162,417	3,603,925
British Baluchistan	636	1,782	552	675	85	62	11	124	3,927	33,449
Total, 1915	309,505	900,766	431,983	476,916	56,453	37,934	6,763	6,148	*2,226,468	31,554,434
Totals 1914	286,704	835,694	390,885	438,122	53,845	36,247	6,633	7,030	2,055,160	34,083,673
Totals 1913	289,745	851,323	395,546	433,932	51,981	34,066	6,224	7,300	*2,070,117	28,255,410
Totals 1912	301,394	867,790	393,502	425,852	50,300	33,037	6,164	7,368	*2,085,407	26,783,601
Totals 1911	299,542	858,388	387,657	406,486	47,408	31,563	5,956	6,336	*2,043,336	27,350,585
Totals 1910	301,895	879,145	405,969	440,101	56,628	37,732	6,798	6,763	*2,135,031	32,340,338
Totals 1909	294,997	845,946	376,742	390,375	48,654	30,806	5,690	7,336	*2,000,546	28,958,056
Totals 1908	289,284	819,595	354,196	366,602	44,430	28,236	5,264	7,347	*1,914,954	25,955,219
Totals 1907	300,857	808,368	335,739	344,351	40,707	26,186	4,869	6,822	*1,867,899	22,459,065
Totals 1906	311,039	818,974	335,840	338,010	39,863	25,014	4,497	6,871	*1,880,108	22,370,186
Totals 1905	316,370	787,784	314,422	314,043	37,182	23,315	4,124	7,205	1,804,445	24,496,879

* Details not given of 42 Bombay suits in 1906; 56 Madras suits in 1906, 96 in 1907, 74 in 1908, 92 in 1909. 376 in 1910, 71 in 1911, 64 in 1912, 22 in 1913, and 28 suits in 1914; 370 Bengal suits in 1909; and 49 Delhi suits in 1913 and 84 in 1914.

THE INDIAN POLICE.

The Indian Government employ 196,304 Officers and men in the Indian Police. The total cost of maintaining the Force is Rs. 3,957,038. In large cities, the Force is concentrated and under direct European control; in the mofussil the men are scattered throughout each District and located at various Outposts and Police Stations. The smallest unit for administrative purposes is the Outpost which generally consists of 3 or 4 Constables under the control of a Head Constable. Outpost Police are maintained to patrol roads and villages and to report all matters of local interest to their superior, the Sub-Inspector. They have no powers to investigate offences and are a survival of the period when the country was in a disturbed state and small bodies of Police were required to keep open communications and afford protection against the raids of dacoits. It is an open question whether they are now of much use. Each Outpost is under a Police Station which is controlled by an officer known as a Sub-Inspector.

Distribution of Police.—The area of a Police Station varies according to local conditions. The latest figures available are: —

—	Average area per Police Station.	Average number of Regular Civil Police per 10,000 of Population.
	Square miles.	
Bengal *	126	4·8
Assam	616	5·3
United Provinces	127	7·7
Punjab	203	10 3
North-West Frontier Province	179	19·8
Central Provinces and Berar	242	8·6
Burma *	487	13·4
Madras	144	8·0
Bombay *	252	15·0

* Excluding the towns of Calcutta, Bombay and Rangoon. The figures include the Railway police, but not Military police.

Organisation of Police.

The Police Station Officer (the Sub-Inspector) is responsible for the investigation of all cognisable crimes, that is to say, all offences in which the Police can arrest without a warrant from a Magistrate, which occur within his jurisdiction; he is also held responsible for the maintenance of the public peace and the prevention of crime. From the point of view of the Indian Ryot, he is the most important Police Officer in the District and may rightly be considered the backbone of the Force.

Superior to the Sub-Inspector is the Inspector who holds charge of a Circle containing 4 or 5 Police Stations. His duties are chiefly those of supervision and inspection. He does not ordinarily interfere in the investigation of crime unless the conduct of his subordinates renders this necessary.

The Inspector is usually a selected and experienced Sub-Inspector. Each District contains 3 or 4 Circles, and in the case of large Districts, is divided into 2 Sub-divisions—one of which is given to an Assistant Superintendent of Police, a European gazetted Officer The Police Force in each District is controlled by a District Superintendent of Police, who is responsible to the District Magistrate (Collector or Deputy Commissioner) for the detection and prevention of crime and for the maintenance of the public peace, and, to his Deputy Inspector-General and Inspector-General, for the internal administration of his Force. Eight or ten Districts form a Range administered by a Deputy Inspector-General, an officer selected from the ranks of the Superintendents. At the head of the Police of each Province is the Inspector-General who is responsible to the Local Government for the administration of the Provincial Police.

Separate but recruited from the District Force is the Criminal Investigation Department, which is under the control of a specially selected European Officer of the rank and

standing of a Deputy Inspector-General. The Criminal Investigation Department, usually called the C. I. D., is mainly concerned with political inquiries, sedition cases and crimes with ramifications over more than one District or which are considered too important to leave in the hands of the District Police. It is a small force of Sub-Inspectors and Inspectors who have shown their ability and intelligence when working in the mofussil and forms in each Province a local Scotland Yard.

The larger Cities of Calcutta, Bombay, and Madras have their own Police Force, independent of the Inspector-General of Police, and under the control of a Commissioner and 2 or more Deputies. For Police purposes each city is divided into divisions; in Calcutta each division is in charge of a Deputy Commissioner of Police; in Bombay and Madras of a Superintendent, these officers being selected from the European ranks of the City Force. In Bombay, however, the Superintendents are Gazetted Officers. Each division is sub-divided into a small number of Police Stations, the station being in charge of an Inspector assisted by Indian Sub-Inspectors and European Sergeants.

The Supreme Government at Delhi and Simla keeps in touch with the Provincial Police by means of the Director of Criminal Intelligence and his Staff. The latter do not interfere in the Local Administration and are mainly concerned with the publication of information regarding international criminals, inter-provincial crime and Political Inquiries in which the Supreme Government is interested.

Recruitment.—The constable is enlisted locally. Certain castes are excluded from service and the formation of cliques by filling up the Force from any particular caste or locality is forbidden. In some Provinces a fixed percentage of foreigners must be enlisted. Recruits must produce certificates of good character and pass a medical test. They must be above certain standards of physical development. The constable rises by merit to the rank of Head Constable and, prior to the Police Commission, could rise to the highest Indian subordinate appointments. Since 1906, his chances of promotion have been greatly curtailed; this has certainly lowered the standard coming forward for service in the Force in the lower ranks.

The Sub-Inspector, until 1906, was a selected Head Constable, but Lord Curzon's Commission laid down that Sub-Inspectors should be recruited direct from a socially better class of Indians. In most Provinces, eighty per cent. of the Sub-Inspectors are selected by nomination, trained for a year or 18 months at a Central Police School, and, after examination, appointed direct to Police Stations to learn their work by actual experience. It is too early to judge this system by results, but it has no doubt great disadvantages and undetected crime in India is increasing rapidly.

An Inspector is generally a selected Sub-Inspector. Direct nomination is the exception, not the rule.

The Deputy Superintendent, a new class of officer, instituted on the recommendation of the Commission; is an Indian gazetted officer and is the native Assistant to the District Superintendent of Police. He is either selected by special promotion from the ranks of the Inspectors or is nominated direct, after a course at the Central Police School.

Prior to 1893, the gazetted ranks of the Force were filled either by nomination or by regimental officers seconded from the Army for certain periods. In 1893, this system was abandoned and Assistant Superintendents were recruited by examination in London. On arrival in India, they were placed on probation until they had passed their examinations in the vernacular, in law, and in riding and drill. The establishment of Police Training Schools in 1906 has done much to improve the training of the Police Probationer, and selection by examination has given Government a better educated officer, but open competition does not reveal the best administrators and should be tempered, as in the Navy, by selection.

Pay.—The monthly salaries drawn by each grade of Police Officer are as follows:—

A constable draws from	.. Rs.	10 to 12.
A Head Constable draws	.. ,,	15 to 20.
A Sub-Inspector from	.. ,,	50 to 100.
An Inspector from	.. ,,	150 to 250.
Deputy Superintendents from	.. ,,	250 to 500.
Assistants from	.. ,,	300 to 500.
District Superintendents of Police from	.. Rs.	700 to 1,200.
Deputy Inspectors-General from	.. .. Rs.	1,500 to 1,800.
Inspectors-General from	Rs.	2,000 to 3,000

The appointments of Commissioner of Police, Calcutta, Bombay, and Madras, and all Provincial Inspectors-General, may be held by a member of the Indian Civil Service, if no Police Officer is found suitable for such appointments.

Internal Administration.—The District Force is divided into 2 Branches—Armed and Unarmed. As the duties of the armed branch consist of guarding Treasuries, escorting treasure and prisoners and operating against dangerous gangs of dacoits, they are maintained and controlled on a military basis. They are armed and drilled and taught to shoot after military methods. The unarmed branch are called upon to collect fines magisterially inflicted, serve summonses and warrants, control traffic, destroy stray dogs, extinguish fires, enquire into accidents and non-cognizable offences. The lower grades are clothed and housed by Government without expense to the individual. The leave rules are fairly liberal, but every officer, European or Native, must serve for 30 years before he is entitled to any pension, unless he can obtain a medical certificate invaliding him from the service. This period of service in an Eastern climate is generally admitted to be too long and the efficiency of the Force would be considerably improved if Government allowed both the officers and men to retire after a shorter period of service.

STATISTICS OF POLICE WORK.

The undesirability of attaching undue importance to statistical results as a test of the merits of police work was a point upon which considerable stress was laid by the Indian Police Commission, who referred to the evils likely to result from the prevalence among subordinate officers of an impression that the advancement of an officer would depend upon his being able to show a high ratio of convictions, both to cases and to persons arrested, and a low ratio of crime. The objection applies more particularly to the use of statistics for small areas; but they cannot properly be used as a basis of comparison even for larger areas without taking into account the differences in the conditions under which the police work; and, it may be added, they can at the best indicate only very imperfectly the degree of success with which the police carry out that important branch of their duties, which consists in the prevention of crime. These considerations have been emphasized in recent orders of the Government of India. Subject to these observations, the figures below may be given as some indication of the volume of work falling upon the police, and of the wide differences between the conditions and the statistical results in different provinces:—

Administrations.	Number of Offences reported.	Number of Persons under Trial.	Persons whose cases were disposed of				Persons remaining under Trial at the end of the Year.
			Discharged or Acquitted.	Convicted.	Committed or Referred.	Died, Escaped or Transferred to another Province.	
Bengal	344,358	305,550	97,438	193,606	3,404	191	10,911
Bihar and Orissa ..	107,993	107,348	50,931	50,151	1,682	124	4,460
United Provinces ..	231,087	342,948	194,092	135,938	5,605	249	7,064
Punjab	208,561	285,091	198,674	70,711	1,557	262	13,887
North-West Frontier Province.	24,505	36,162	18,560	16,455	587	43	517
Burma	121,468	196,180	66,703	115,884	1,754	3,166	8,673
Central Provinces and Berar.	37,621	51,293	27,594	19,380	1,617	48	2,654
Assam	48,254	(*b*) 38,531	(*c*)19,240	16,168	500	62	2,550
Ajmer-Merwara ..	7,891	10,027	3,354	6,078	31	116	448
Coorg	4,151	4,728	2,326	1,869	3	....	530
Madras	346,543	463,940	202,170	244,201	4,476	173	12,920
Bombay	173,149	(*a*)239,205	90,442	137,470	1,950	1,614	7,721
British Baluchistan ..	7,499	11,528	5,819	4,477	4	90	1,138
Delhi	5,980	5,848	3,182	2,503	16	1	146
TOTAL, 1916 ..	1,669,070	2,098,379	980,525	10,14,891	23,186	6,139	73,619
TOTALS 1915 ..	1,603,075	2,085,622	982,589	997,210	25,185	4,769	75,851
1914 ..	1,634,224	2,120,472	1,031,374	992,922	23,554	4,949	67,631
1913 ..	1,658,405	*a*2,141,362	1,051,888	987,592	22,459	4,735	74,652
1912 ..	1,659,254	*a*2,132,813	1,053,657	977,267	21,650	4,313	75,765
1911 ..	1,502,995	*a*1,960,679	966,783	897,786	21,173	3,906	70,832
1910 ..	1,447,732	*a*1,884,951	922,379	872,298	21,029	4,439	64,677
1909 ..	1,421,350	*a*1,856,219	914,500	854,667	22,174	3,349	61,502
1908 ..	1,412,817	*a*1,814,207	897,462	860,065	24,535	3,625	58,496
1907 ..	1,411,653	1,816,827	880,706	851,097	21,296	3,505	60,223
1906 ..	1,404,777	1,805,707	864,493	860,486	22,776	3,911	54,041
1905 ..	1,385,344	1,767,134	823,185	862,398	21,293	6,429	*d*53,825

(*a*) Includes 8 persons(8 handed over to Military Authorities) in 1916.
,, 10 ,, (10 handed over to Military Authorities) in 1915.
,, 25 ,, (9 on dormant file, 16 handed over to Military Authorities) in 1914.
,, 30 ,, (13 ,, 17 ,, ,, to Military Authorities) in 1913.
,, 149 ,, (139 ,, 9 ,, ,, ,, ,, ,, and 1 sent to Naval Authorities) in 1912.
,, 203 ,, (171 ,, 35 ,, ,, to Military Authorities) in 1911.
,, 128 ,, (117 ,, 11 ,, ,, to Military Authorities) in 1910.
,, 26 ,, (10 ,, 14 ,, ,, ,, ,, ,, and 2 referred under Section 307, Criminal Procedure Code) in 1909

(*b*) ,, 1 person remanded for retrial.
(*c*) Excludes the commitment of 10 persons quashed by the High Court.
(*d*) Excludes 4 persons whose cases are pending by reason of their being insane.

Principal Police Offences.

Administrations.	Cases.													
	Offences against the State and Public Tranquility.		Murder.		Other serious Offences against the Person.		Dacoity.		Cattle Theft.		Ordinary Theft.		House-trespass and Housebreaking with intent to commit Offence.	
	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.
Bengal	2,279	871	510	68	5,800	1,396	595	85	1,469	582	28,668	5,491	48,119	2,765
Calcutta Town and Suburbs.	131	61	16	1	667	129	1	..	33	27	4,741	1,335	1,349	261
Bihar and Orissa ..	973	383	269	55	3,015	746	209	24	1,364	519	18,130	3,945	21,594	1,518
United Provinces ..	1,702	753	802	227	9,338	3,029	960	153	5,060	1,053	35,289	6,027	67,556	4,495
Punjab	1,546	559	570	238	6,561	2,012	122	41	2,984	908	9,164	2,588	20,240	2,424
Delhi	24	8	8	2	146	38	9	..	27	8	420	137	513	74
N.-West Frontier Pro.	203	130	417	181	1,325	634	262	48	146	47	870	293	1,790	297
Burma	691	388	621	151	10,484	3,144	291	58	5,629	1,493	17,328	6,133	9,692	3,191
Rangoon	33	18	17	1	277	95	14	1	..	..	1,046	463	259	96
Central Provinces and Berar.	456	195	260	118	2,363	773	64	13	827	317	19,285	1,683	10,708	1,104
Assam	730	305	72	17	1,337	323	16	3	408	151	5,537	1,128	7,020	641
Coorg	9	7	2	....	44	14	..	..	12	10	177	52	40	4
Madras	1,626	626	749	141	5,504	1,439	603	89	4,916	1,362	22,474	5,462	17,351	2,606
Bombay	973	298	427	179	3,892	1,235	139	47	3,479	1,039	10,988	4,044	9,751	1,885
Bombay Town&Island.	64	49	33	9	706	270	1	1	..	..	5,432	2,721	1,313	294
TOTAL, 1916 ..	11,440	4,651	4,773	1,388	51,459	15,277	3,286	563	26,354	7,516	179,549	41,502	217,295	21,655
1915.	11,698	4,753	1,307	4,757	51,795	15,186	3,730	733	28,382	8,248	188,286	43,572	235,509	22,642
1914.	11,706	4,740	1,484	4,624	52,522	15,324	2,770	457	27,329	7,926	178,824	39,664	216,817	21,296
1913.	12,172	4,798	1,397	4,471	52,948	15,458	2,494	397	27,261	7,495	*174,727	*37,685	205,860	20,014
1912.	12,414	4,716	1,308	4,430	52,337	14,763	2,512	413	27,254	7,171	176,091	38,356	199,480	20,178
1911.	11,873	4,456	1,281	4,163	49,308	14,123	2,454	367	25,952	6,789	166,304	37,501	205,274	20,065
TOTALS .. 1910.	11,700	4,599	1,092	4,031	47,750	13,749	2,150	369	27,237	7,200	159,280	37,279	199,604	19,784
1909.	11,919	4,614	1,143	3,885	44,960	12,947	2,524	453	27,833	7,710	169,451	40,872	207,283	21,296
1908.	12,411	4,797	1,203	4,014	43,838	12,678	2,984	659	29,456	8,927	194,246	48,448	236,280	24,972
1907.	12,181	4,454	1,106	3,603	42,921	12,506	2,360	428	27,809	7,492	178,898	41,173	212,299	21,679
1906.	12,386	4,490	1,090	3,555	42,993	12,452	2,085	419	27,577	7,831	184,915	45,112	203,701	22,654
1905.	12,313	4,456	1,048	3,386	43,828	12,920	2,276	434	25,847	7,038	174,091	40,401	194,232	21,760

* Including some cases of cattle theft.

JAILS.

Jail administration in India is regulated generally by the Prisons Act of 1894, and by rules issued under it by the Government of India and the local governments. The punishments authorised by the Indian Penal Code for convicted offenders include transportation, penal servitude, rigorous imprisonment (which may include short periods of solitary confinement), and simple imprisonment. Accommodation has also to be provided in the jails for civil and under-trial prisoners.

The origin of all jail improvements in India in recent years was the Jail Commission of 1889. The report of the Commission, which consisted of only two members, both officials serving under the Government of India, is extremely long, and reviews the whole question of jail organization and administration in the minutest detail. In most matters the Commission's recommendations have been accepted and adopted by Local Governments, but in various matters, mainly of a minor character, their proposals have either been rejected *ab initio* as unsuited to local conditions, abandoned as unworkable after careful experiment or accepted in principle but postponed for the present as impossible.

The most important of all the recommendations of the Commission, the one that might in fact be described as the corner stone of their report, is that there should be in each Presidency three classes of jails: in the first place, large **central jails** for convicts sentenced to more than one year's imprisonment; secondly, **district jails**, at the head-quarters of districts; and, thirdly, **subsidiary jails** and "lock-ups" for under-trial prisoners and convicts sentenced to short terms of imprisonment. The jail department in each province is under the control of an Inspector-General; he is generally an officer of the Indian Medical Service with jail experience, and the Superintendents of certain jails are usually recruited from the same service. The district jail is under the charge of the civil surgeon, and is frequently inspected by the district magistrate. The staff under the Superintendent includes, in large central jails, a Deputy Superintendent to supervise the jail manufactures, and in all central and district jails one or more subordinate medical officers. The executive staff consists of jailors and warders, and convict petty officers are employed in all central and district jails, the prospect of promotion to one of these posts being a strong inducement to good behaviour. A Press Note issued by the Bombay Government in October, 1915, says:—"The cadre and emoluments of all ranks from Warder to Superintendent have been repeatedly revised and altered in recent years. But the Department is not at all attractive in its lower grades. The two weak spots in the jail administration at the moment are the insufficiency of Central Prisons and the difficulty of obtaining good and sufficient warders.

Employment of Prisoners.—The work on which convicts are employed is mostly carried on within the jail walls, but extra-mural employment on a large scale is sometimes allowed; as, for example, when a large number of convicts were employed in excavating the Jhelum Canal in the Punjab. Within the walls prisoners are employed on jail service and repairs, and in workshops. The main principle laid down with regard to jail manufactures is that the work must be penal and industrial. The industries are on a large scale, multifarious employment being condemned, while care is taken that the jail shall not compete with local traders. As far as possible industries are adapted to the requirements of the consuming public departments, and printing, tent-making, and the manufacture of clothing are among the commonest employments. Schooling is confined to juveniles; the experiment of teaching adults has been tried, but literary instruction is unsuitable for the class of persons who fill an Indian jail.

The conduct of convicts in jail is generally good, and the number of desperate characters among them is small. Failure to perform the allotted task is by far the most common offence. In a large majority of cases the punishment inflicted is one of those classed as "minor." Among the "major" punishments fetters take the first place. Corporal punishment is inflicted in relatively few cases, and the number is steadily falling. Punishments were revised as the result of the Commission of 1889. Two notable punishments then abolished were shaving the heads of female prisoners and the stocks. The latter, which was apparently much practised in Bombay, was described by the Commission as inflicting exquisite torture. Punishments are now scheduled and graded into major and minor. The most difficult of all jail problems is the internal maintenance of order among the prisoners, for which purpose paid warders and convict warders are employed. With this is bound up the question of a special class of well-behaved prisoners which was tried from 1905 onwards in the Thana Jail.

Juvenile Prisoners.—As regards "youthful offenders"—*i.e.*, those below the age of 15—the law provides alternatives to imprisonment; and it is strictly enjoined that boys shall not be sent to jail when they can be dealt with otherwise. The alternatives are detention in a reformatory school for a period of from three to seven years, but not beyond the age of 18; discharge after admonition; delivery to the parent or guardian on the latter executing a bond to be responsible for the good behaviour of the culprit; and whipping by way of school discipline.

The question of the treatment of "young adult" prisoners has in recent years received much attention. Under the Prisons Act, prisoners below the age of 18 must be kept separate from older prisoners, but the recognition of the principle that an ordinary jail is not a fitting place for adolescents (other than youthful habituals) who are over 15, and therefore ineligible for admission to the reformatory school, has led Local Governments to consider schemes for going beyond this by treating young adults on the lines followed at Borstal, and considerable progress has been made in this direction. In 1905, a special class for selected juveniles and young adults was established at the Dharwar

jail in Bombay; in 1908 a special juvenile jail was opened at Alipore in Bengal; in 1909 the Meiktila jail in Burma and the Tanjore jail in Madras were set aside for adolescents, and a new jail for juvenile and "juvenile adult" convicts was opened at Bareilly in the United Provinces; and in 1910 it was decided to concentrate adolescents in the Punjab at the Lahore District jail, which is now worked on Borstal lines. Other measures had previously been taken in some cases; a special reformatory system for "juvenile adults" had, for example, been in force in two central jails in the Punjab since the early years of the decade, and "Borstal enclosures" had been established in some jails in Bengal. But the public is slow to appreciate that it has a duty towards prisoners, and but little progress has been made in the formation of Prisoners' Aid Societies except by the Salvation Army.

Reformatory Schools.—These schools have been administered since 1899 by the Education department, and the authorities are directed to improve the industrial education of the inmates, to help the boys to obtain employment on leaving school, and as far as possible to keep a watch on their careers.

Transportation.—Transportation is an old punishment of the British Indian criminal law, and a number of places were formerly appointed for the reception of Indian transported convicts. The only penal settlement at the present time is Port Blair in the Andaman Islands. Under existing rules convicts sentenced to transportation for life, or for a term of years of which six have still to run, may be transported to the Andamans, subject to their being physically fit, and to some other conditions in the case of women. The sanctioned scheme contemplates five stages in the life of a male transported convict, the first six months being passed in a cellular jail, the next eighteen months in association in a jail similar to those of the Indian mainland, and the following three years as a convict of the third class kept to hard gang labour by day and confined in barracks by night. Having thus completed five years, a convict may be promoted to the second class; in which he is eligible for employment in the various branches of the Government services or in the capacity of servants to a private resident. After five years so spent, a well-behaved convict enters the first class, in which he labours under more favourable conditions, or is granted a ticket enabling him to support himself, with a plot of land. He may now send for his family or marry a female convict. The three later stages of this discipline have been in force for many years, and the first for some time, the cellular jail having been finished in 1905; but the associated jail for the second stage has not yet been built. Females are kept at intramural work under strict jail discipline for three years; for the next two years they are subjected to a lighter discipline, and at the end of five years they may support themselves or marry. Promotion from class to class depends on good conduct. The convicts are employed in jail service, in the erection and repair of jail buildings, in the commissariat, medical, marine, and forest departments, in tea-gardens and at other agricultural work, and in various jail manufactures. Ordinary male convicts sentenced to transportation for life are released, if they have behaved well, after twenty years, and persons convicted of dacoity and other organised crime after twenty-five. *Thags* and professional prisoners are never released. Well-behaved female convicts are released after fifteen years. The release is sometimes absolute and sometimes, especially in the case of dacoits, subject to conditions, *e.g.*, in regard to residence. In some cases released convicts prefer to remain in the settlement as free persons. The settlement is administered by a superintendent, aided by a staff of European assistants and Indian subordinates. The convict population of Port Blair amounted in 1915-16 to 12,425, consisting of 11,864 males and 561 females. The total population of the settlement was 17,331.

The variations of the jail population in British India during five years are shown in the following table:—

——	1916.	1915.	1914.	1913.	1912.	1911.
Jail population of all classes on 1st January	122,282	112,015	105,555	101,908	91,876	102,991
Admissions during the year	550,971	568,280	516,098	492,308	492,820	470,513
Aggregate	673,253	680,295	621,653	594,216	584,696	573,504
Discharged during the year from all causes	557,525	558,008	509,638	488,677	482,786	481,622
Jail population on 31st December ..	115,728	122,287	112,015	105,539	101,910	91,882
Convict population on 1st January ..	107,806	98,963	92,913	89,287	79,668	91,505
Admissions during the year	173,441	180,466	168,723	160,851	159,424	152,396
Aggregate	281,247	279,429	261,636	250,138	239,092	243,901
Released during the year	175,587	168,508	159,468	154,494	147,292	151,936
Transported beyond seas	1,535	1,486	1,319	1,566	1,382	1,138
Casualties, &c.	2,900	2,616	2,429	2,053	2,084	2,222
Convict population on 31st December.	102,208	107,811	98,963	92,913	89,287	79,668

The daily average number of prisoners, which had steadily decreased since 1908, rose slightly in 1913 to nearly the figure of 1911. The fall in 1912 was, however, largely attributable to the release of convicts and civil prisoners on the occasion of the Delhi Durbar. The increase in 1913 was distributed among all provinces except the United Provinces of Agra and Oudh and Coorg, in which the figures continued to show decreases.

More than one-half of the total number of convicts received in jails during the year came from the classes engaged in agriculture and cattle tending over 134 000 out of 160,000 are returned as illiterate

The percentage of previously convicted prisoners was 19·93 as against 19·87 in 1916 while the number of youthful offenders fell from 359 to 327. The following table shows the **nature and length of sentences** of convicts admitted to jails in 1915 to 1917 :—

Nature and Length of Sentence.	1917.	1916.	1915.
Not exceeding one month	39,063	42,669	45,101
Above one month and not exceeding six months..	63,124	66,388	69,346
„ six months „ „ one year ..	31,488	34,725	34,749
„ one year „ „ five years ..	21,154	23,962	24,755
„ five years „ „ ten „ ..	2,564	2,631	2,984
Exceeding ten years	212	345	242
Transportation beyond seas—			
(*a*) for life	1,313	1,197	1,309
(*b*) for a term	705	745	1,189
Sentenced to death	752	791	828

The total daily average population for 1917 was 96,980; the total offences dealt with by crimina courts was 179, and by Superintendents 144,237. The corresponding figures for 1916 were 105,966,154 and 164,594 respectively.

The total number of corporal punishments again showed a decrease, *viz.*, from 302 to 265. The total number of cases in which penal diet (with and without solitary confinement) was prescribed was 5,607 as compared with 6,690 in the preceding year.

Total expenditure decreased from £660,992 to £652,582, and total cash earnings from £131,355 to £95,309; there was, consequently, an increase of £18,741 in the net cost to Government.

The death rate decreased from 19·19 per mille in 1916 to 18·83 in 1917. The admissions to hospital were somewhat higher, and the daily average number of sick rose slightly. The chief causes of death were tubercle of the lungs, dysentery and pneumonia.

Executive and Judicial Functions.

Throughout the history of political agitation in India, few matters have received more consistent attention than the question of the separation of the Judicial and the Executive functions. It has been one of the principal planks in the political platform of the National Congress since its inception in 1885, and has received the support of men of every shade of political opinion, from the most violent Extremist to the most conciliatory Moderate.

The question arises from the fact that the Indian Administration is based on the Oriental view that all power should be concentrated in the hands of a single official. Thus the District Magistrate is the chief revenue authority in the District, he controls local boards and municipalities, and directs the District Police, and, in fine, almost every department within the District is to a large extent under his influence. Sessions trials and Civil Justice fall within the province of the District Judge, but there remains under the District Magistrate's orders a body of subordinate Magistrates who dispose of simple criminal cases, and commit graver ones to the Sessions.

The opponents of the existing system are apt to rely largely on *ad capitandum* phrases, like "the maintenance of judicial independence," and "a violation of the first principles of equity," rather than to specify exactly what points they really consider objectionable. It appears, however, that there are two main items in the District Magistrate's position to which exception is taken: one is that he is executive head of the District with direct control of the police, has the power of trying cases; the other is that the subordinate Magistrates, who try the great majority of cases, are directly under him, receive his orders, and rely on his good opinion for their promotion.

As regards the first point, the number of cases actually tried by the District Magistrate is exceedingly small. Sir Charles Elliott defending the existing system in 1896, said:—"There are many Districts in Bengal in which he does not try 12 cases a year." Since 1896 miscellaneous work has increased so much that even this small number has been greatly reduced. In fact, in Bombay to-day the majority of District Magistrates probably go through the year without trying a single case, and the difference would hardly be noticeable if the District Magistrate altogether lost his powers to try cases. The power is, however, sufficiently useful on occasions to outweigh the fear of harm arising from any abuse of that power on the rare occasions when it is used.

The more important item of the District Magistrate's power, that of control over his subordinate Magistrates, is attacked on the ground that he interferes with their "judicial independence." It is here assumed that control and interference are one and the same thing. If the District Magistrate said to his subordinate, "I consider this man guilty, and I expect you to convict him," there would be very real cause for complaint. But interference of this type does not occur, and is not alleged. It has been said that inspection is to the District Officer the very breath of his nostrils, and it is very largely to his continual inquisitiveness into the work of his subordinates, that the relatively high standard of justice attained by the subordinate magistracy in India is due. The points towards which his inquiries are most frequently directed are matters like want of sense of proportion in sentences; delays and irregularities in procedure: subservience to the interests of a local bar: prolixity in judgments and so forth. If control of the Magistracy were exercised only by the District Judge, who is practically tied to his bench, this supervision would be impossible, and the only check on the subordinate Magistrates would be occasional strictures passed by the Judge in appeal or on revision.

The opponents of the existing system would substitute for the present Magistracy trained lawyers, whose sole work would be that of stipendiary magistrates. There is no reason to suppose that the trained lawyer would be any less liable to the faults mentioned above. Nor is the Magistrate of to-day altogether untrained. The criminal law of India is to a very large extent independent of customary and case law, and is based on comparatively simple codes. Every official Magistrate is examined in these codes, and with a few years' experience, he is often a match in argument for all but the best of the local *vakils*. It is not, therefore, apparent that any gain would result from this change, while the increased charge to the public revenues would be enormous.

In 1899, the movement against the existing system culminated in a "memorial on the proposed separation of the Judicial and Executive duties in India," addressed to the Secretary of State, and signed by ten Indian gentlemen—mostly high judicial authorities. This memorial sets forth eight objections to the existing system, and it may perhaps be instructive to examine these seriatim, and to indicate with respect to each point the grounds on which an apology for the present system may be based:—

(1) "That the combination of judicial with executive duties in the same officer violates the first principles of equity."

If the same officer actually brought an offender to justice, and then tried him personally, the above theoretical objection might have considerable weight. In practice, however, as has been shown above, this does not occur; and the combination of functions in the District Officer is governed in such a way by criminal codes that the interests of accused persons are effectually safeguarded.

(2) "That while a judicial authority ought to be thoroughly impartial, and approach the consideration of any case without previous knowledge of the facts, an Executive Officer does not adequately discharge his duties, unless his ears are open to all reports and information which he can in any degree employ for the benefit of the District."

In reply to this it may be repeated that the District Magistrate, in fact, tries very few cases at all and it may be noted, moreover, that the law very largely restricts the possibility of a magistrate trying a case of which he has any previous knowledge. Further, it is surely to the public advantage that the police should be controlled by the District Magistrate, whose sole aim is or should be justice,

rather than by a police officer whose professional zeal might weigh hardly on the innocent suspect, and whose *esprit de corps* might shield a corrupt or unscrupulous subordinate from justice.

(3) "That Executive Officers in India, being responsible for a large amount of miscellaneous business, have not time satisfactorily to dispose of judicial work in addition."

By this it is presumably meant that the Executive Officer is at present overworked. This is quite possible, but the remedy would appear to lie rather in an increase of staff than in a re-distribution of functions, which in itself could not remedy the defect.

(4) "That, being keenly interested in carrying out particular measures, they are apt to be brought more or less into conflict with individuals, and therefore that it is inexpedient that they should also be invested with judicial powers."

It is implied here that the District Officer may use his judicial powers to enforce the executive measures in which he is interested. It is not unknown for a District Magistrate to issue orders to subordinates enjoining severe sentences in particular classes of cases and this may have reference to a particular executive policy (*e.g.*, such orders might be issued with regard to smuggling cases in a District where the illicit traffic in cocaine was rife). But it by no means follows that any injustice will result from such a line of action. Moreover, if this kind of "interference" by the District Magistrate were stopped, the only alternative left to Government, in cases where they wished specially to repress a particular type of crime, would be to amend the criminal codes by raising the minimum penalty for the offence, thereby depriving Magistrates of all discretion in the matter.

(5) "That under the existing system Collector-Magistrates do, in fact, neglect judicial for executive work."

It is not at first sight obvious how this can be urged as an objection to the fact that they do both types of work. It is true, as already stated, that the District Magistrate tries very few original cases, but it by no means follows that what judicial work he does, is done negligently.

(6) "That appeals from revenue assessments are apt to be futile when they are heard by Revenue Officers."

It is insinuated that all revenue matters should be decided by the operation of the weighty and complicated machinery of the Civil Courts. The idea of such a system in India, where three-quarters of the population are dependent on revenue-paying land, conjures up such a nightmare of confusion, that the imagination positively reels. The cost would be colossal. Nor is the objection really relevant. The Revenue Officer when hearing appeals from executive acts of his subordinates, is still an Executive and not a Judicial Officer, and what is here aimed at is a revision of the scheme of matters, which the law allows to be dealt with executively, rather than a separation of the two functions.

(7) "That great inconvenience, expense and sufferings are imposed upon suitors required to follow the camp of a Judicial Officer, who, in the discharge of his executive duties, is making a tour of his District."

This is perhaps one of the least convincing objections advanced against the existing system. In the first place a Magistrate in headquarters is likely to be at least as far from the homes of suitors, as he is in camp. The careful Magistrate, moreover, will arrange the hearing of cases at places which suit the convenience of parties as far as possible, and considerable trouble and expense are often saved to parties in this way. If all judicial work were done by Magistrates who had no other work, the number of Magistrates would be much reduced, and it is obvious that three resident Magistrates in a District must be much less accessible than a dozen or more who are continually moving about among the agricultural population. The only people who really are inconvenienced by the touring of a Magistrate are the pleaders.

(8) "That the existing system not only involves all whom it concerns in hardships and inconvenience, but also by associating the judicial tribunal with the work of the Police and of detectives, and by diminishing the safeguards afforded by the rules of evidence, produces actual miscarriages of justice and creates, though justice be done, opportunities of suspicion, distrust and discontent which are greatly to be deplored."

It is difficult to answer so general and indefinite an objection as this, except by flat denial.

It may, however, be said that if miscarriages of justice, due to this cause, were at all frequent they could never long remain hid, and much more would be heard of them than is actually the case. In 1896, Mr. Manomohan Ghose, a Bengali lawyer of repute, drew up a memorandum containing an account of 20 cases, which had come to his notice in the course of a long experience at the bar, and in which he alleged that injustice had resulted from the union in one officer of the judicial and executive functions. These instances were discussed by Sir Charles Elliott, formerly Lieutenant-Governor of Bengal, in an article in the *Asiatic Quarterly Review* for October 1896, and his analysis robs this evidence of nearly the whole of its weight.

These then are the main objections which have been raised against the existing system. It may well be asked why, if these objections are groundless, has there been such unanimity in the opinions expressed by reformers. There are perhaps two reasons which are mainly responsible. Firstly, it is beyond question that the proposed separation would everywhere weaken the Collector's position, and thereby that of the British Raj; and secondly, those who desire the separation belong almost without exception to the class from which lawyers are most largely recruited. The separation would not merely provide innumerable stipendiary billets, holders of which would have to be recruited from among the lawyers, but an immense increase of litigation would also result.

There is no doubt that over the greater part of India, the common people place a very real confidence in the Magistracy, and this confidence is largely based on the wise and effective control exercised by District Magistrates over their subordinates. Nor is there any doubt that the common people would view with the most intense alarm any proposal which would render the magistracy independent of this control.

The Laws of 1918

BY

RATANLAL AND DHIRAJLAL

(*Editors of the Bombay Law Reporter*).

Looked at from a purely legal point of view, the legislation of the year 1918 is dry. Regarded, however, from the popular point of view, some measures of far-reaching importance, *viz.*, the Indian Income Tax Act, the Usurious Loans Act, the Cotton Cloth Ac were placed on the Indian Statute Book during the year. After all, the business of law-making went on s usual.

1. The Indian Forest (Amendment) Act.—This act amends the Indian Forest Act of 1878 in three particulars. First, the maximum period for which a protected forest may be closed by a Local Government has been raised from twenty to thirty years, the reason being that the persons holding grazing rights in such forests damage the lands so much that in many cases it is not possible to secure proper regeneration in less than thirty years. Secondly, with the express purpose of enabling Forest Officers not below the rank of Forest rangers, first, to release any tools, boats, carts or cattle seized under s. 52 on the execution by the owner of a bond for the production of the property so released if and when so required (s. 63A). The third amendment is more important as creating a new duty for the public. It is now incumbent upon privilege holders, their servants and village officers to extinguish and prevent forest fires on their own initiative instead of merely requiring them to render assistance to Police and Forest officers when such assistance is requisitioned. To this end, s. 78 of the Act has been amended.

2. The Cinematograph Act.—The ever increasing use of cinematograph as a means of public amusement has rendered necessary legislation guarding the place where it is exhibited thus protecting the public from fire and such like dangers, and also protecting them from viewing undesirable pictures. It is, therefore, enacted that cinematograph exhibitions should be licensed (s 3). The authority that can grant licenses is the District Magistrate in the Mofussil and tne Commissioner of Police in the Presidency towns (s. 4). The authority specified can grant a license only when it is satisfied that (*a*) the rules made under the Act have been substantially complied with, and (*b*) adequate precautions have been taken in the place of show to provide for the safety of persons attending exhibitions therein (s. 5). Any breach of the conditions of the license of the rules made under this Act is punishable with a fine which may extend to Rs. 1,000; and in case of continuing offence, there is a further iability to pay a fine of Rs. 100 for each day during which the offence continues (s. 6). So far the Act provides for the safety of the person of the play-goers. The Act also provides ample safeguards that no objectionable film can be exhibited. Every film that it is meant to be exhibited at a public show must be certified by an authority appointed in this behalf by the Governor-General in Council (s. 7). The section 8 gives power to make rules. The Local Government has the power, subject to such conditions and restrictions as it may impose, to exempt any cinematograph exhibition from the provisions of tbis Act (s. 9).

3. The Indigo Cess Act.—Before the introduction of synthetic dyes, the cultivation of indigo was a most profitable form of agriculture. The supply of synthetic dye has been greatly reduced by the war: this has led to the revival of the natural indigo industry. With a view to re-establish this important industry on a permanent footing and to modernise the methods of cultivation and manufacture of indigo, the Government have levied a cess of one rupee on every Bengal maund of indigo produced in India and exported to any port beyond the limits of British India or to Aden (s. 2). The proceeds of the cess collected shall be applied to meet the cost of such measures as may be considered advisable to take for promoting research in the interests of the indigo industry in India.

4. The Indian Coinage (Amendment) Act.—Early, this year, the Government of India replaced the silver coins of anna pieces by nickel coins of two annas, whose square form is by now very familiar to the public at large. The object of this Act is to legalise the issue and currency of the new nickel coin (s. 3). It is ninety grains Troy in weight, that is, it weighs one and a half times as much as one anna piece (s. 6). It may not be generally known that both the two anna and one anna nickel coins are a legal tender in payment only up to one rupee. In other words, nobody can be compelled to receive more than eight two anna piece or sixteen one anna pieces at one time as payment (s. 7). The old two anna pieces remain current coin for all purposes (s. 8).

5. The Criminal Justice, Aden (Amendment) Act.—The Resident at Aden is also the General Officer Commanding at Aden. Experience has shown that the Resident has to do an ever-increasing volume of judicial work, as he is the sole Court of Session in the District. It is therefore enacted that one more Assistant Resident should be appointed as Additional Sessions Judge, who would try such cases and appeals as the Resident may direct (s. 22A).

6. The Indian Paper Currency (Amendment) Act.—The maximum limit for the issue of currency notes against Treasury bills which has been fixed at 42 crores of rupees is now raised to 66 crores of rupees. This is a war measure which will enure during the continuance of the war and six months thereafter.

7. The Indian Income Tax Act.—The Indian Income Tax Act of 1886 was recently amended on two occasions. Act V of 1916 introduced a graduated scale of assessing

income tax and the Act VII of 1917 introduced small amendments in the Act. All these Acts have been swept away and replaced by the present Act. It is much more elaborate in its design and far reaching in its consequences. It remedies a three fold complaint. First, it remedies inequalities in the assessment of individual tax payers which became accentuated on the introduction of a graduated scale of the tax. Secondly, it defines precisely the methods whereby incomes and profits of various descriptions are to be calculated for income tax purposes. And lastly, it effects a number of improvement in the machinery of assessment for the efficient working of the tax.

The graduated scale is as follows: No tax is levied when the taxable income is less than Rs. 1,000. For incomes varying from Rs. 1,000 to Rs. 2,000, a tax of four pies in the rupee is levied; but the tax is to be assessed at five pies in the rupee for incomes ranging from Rs. 2,000 to Rs 5,000. If the income is any where between Rs. 5,000 to Rs. 10,000, the tax is assessed at six pies in the rupee: and for incomes amounting to Rs. 10,000 to Rs. 25,000, a tax of nine pies in the rupee is levied. For all incomes exceeding Rs. 25,000 a year, a general tax of one anna is imposed (Sch. I).

Chapter I of the Act deals with taxable income. Such income includes "all income from whatever source it is derived if it accrues, or arises or is received in British India." The Act recognises several exemptions: (1) income derived from property held under trust for religious or charitable purposes; (2) income of a religious or charitable institution; (3) income of local authorities; (4) interest on securities held for Provident Funds; (5) amount received in commutation of pension; (6) special allowance to meet expenses incurred in performance of duties of an office; (7) legacies; (8) casual and non-recurrent receipts; (9) perquisites which are not money and which cannot be valued in money (s. 3). Agricultural incomes are not chargeable to income tax: (s. 4): but the following are chargeable (s. 5):— (1) salaries (s. 6); (2) interest on securities (s. 7); (3) income derived from house property (s. 8); (4) income derived from business (s. 9); (5) professional earnings (s. 10); and (6) income derived from other sources (s. 11).

The next Chapter treats of deductions and assessment. It will be noted that dividends declared on shares by limited companies and interest carried on Government and other securities are taxed at the source at the rate of one anna per rupee; but it is open to a shareholder or a security-owner to get proportional reduction at the general assessment of the tax on all of his sources of income. These rates of refund are: one anna in the rupee if the income is below Rs. 1,000; eight pies in the rupee for incomes between Rs. 1,000 and 2,000; seven pies in the rupee for incomes varying from Rs. 2,000 to Rs. 5,000; six pies in the rupee for incomes ranging from Rs. 5,000 to Rs. 10,000; and nine pies in the rupee for incomes aggregating from Rs. 10,000 to Rs. 25,000 (s. 15 and Sch. II). The mode of assessment is also changed. It is obligatory on every company to send a return of its annual income by the 15th o June every year. In case of a person whose income is not less than Rs. 2,000, the Collector shall send a notice calling upon such person to state his total income during the previous year under different heads indicated above (s. 17). It will be open to the Collector to assess the tax upon the income so specified, or to make further inquiry (s. 18). As soon as the sum is fixed, the Collector shall serve a notice of demand upon the assessee (s. 20). An appeal from the assessment of tax by the Collector lies to the Commissioner, which must be made within thirty days (s. 21). The Commissioner has the power on appeal to reduce, enhance or confirm the assessment (s. 22). The Chief Revenue authority has the power *suo motu* to call for any assessment and revise the same (s. 23). A penal assessment of double the amount of the tax can be levied from any person who is guilty of concealing any source of his income (s. 24).

Where the taxable income varies from Rs. 1,000 to Rs. 2,000, the Collector has summary powers of assessment (s. 30).

Liability to pay tax in special cases is incurred by the guardian, trustee or agent of a minor lunatic or idiot or a person residing out of British India (s. 31) and the Court of Wards (s. 32).

Refund is allowed to individual share-holders, partners, and owners of securities, if they satisfy the Collector that their total income in the previous year was less than the amounts specified in Schedule II (s. 37). If a person makes a false statement in the declaration made by him under s. 21 (3), he commits an offence under s. 177 of the Indian Penal Code (s. 40); but such a prosecution will lie only at the instance of the Collector (s. 41).

When a question arises with reference to the interpretation of any provision of this Act or of any rule framed thereunder, the chief revenue authority may draw up a statement of the case and refer it to the High Court (s. 51).

No suit can be brought in any Civil Court to set aside or modify any assessment; and no prosecution, suit or other proceeding shall lie against any Government Officer for anything done in good faith under this Act (s. 52).

8. The Indian Defence Force (Amendment) Act.—This Act makes a small amendment in the Indian Defence Force Act, III of 1917. Under s. 12 of the latter Act, the enrolment of non-European British subjects was limited to a period of six months from the commencement of the Act. That period having expired, it is now enacted that the Governor-General in Council may by notification allow recruiting to be re-opened from time to time in specified areas.

9. The Indian Soldiers (Litigation) Act, 1918.—Early in 1915, the Government of India passed Act XII of 1915, to protect soldiers on active service from the effect of litigation by or against them as long as they are on active service. Experience of three years has shown some defects in the machinery provided by the Act. The Act of 1915 is therefore repealed. The object of the present

as well as the repealed Acts is to provide for postponement of proceedings in which Indian soldiers serving under war conditions are concerned. A soldier is regarded as serving under war conditions (*a*) during the continuance of the present war and for six months thereafter, (*i*) when he is serving out of India, (*ii*) when he is under orders to proceed on field service, (*iii*) when the unit to which he belongs is mobilised, or (*iv*) when such soldier by reason of state of war now existing is precluded from obtaining leave of absence to enable him to attend a Court as a party to any proceeding therein (s. 3). It is a matter of some doubt whether a soldier who has either been taken as a prisoner of war by the enemy or interned by a neutral power can still be regarded as serving under war conditions. The Act of 1915 was discovered to be unworkable, for under its ss. 4 and 7, the Court or the Collector had to decide that an Indian soldier who was a party to the proceeding was serving under war conditions before steps could be taken to postpone the proceeding. Under the present Act, the above procedure has been simplified, and it now provided that Civil and Revenue Courts shall suspend proceedings when they have reason to believe that any party is an Indian soldier who is unavoidably absent and is not represented. When a plaint is presented in any Court, and the other side is known to be serving on war conditions, such fact should be stated in the plaint (s. 4). In the case of unrepresented Indian soldiers, the Collector has the power to intervene and certify the fact (s. 5). When the Collector has so certified, or where the Court has an Indian soldier who is a party to a proceeding before it, and is unable to appear thereon, or is not represented, the Court shall suspend the proceeding and give notice of it to the prescribed authority (s. 6). If the prescribed authority certifies that the soldier is serving under war conditions and that a postponement of the proceeding is necessary in the interest of justice, the Court shall postpone the proceeding for a prescribed period (s. 7); but in absence of such a certificate, the Court is bound to go on with the proceedings (s. 8). A soldier is deemed to be on war service even if he is on leave of absence for a period not exceeding two months or on sick leave for a period not exceeding three months, at the end of which he is to proceed on service (s. 9). The Court has always the power to set aside the decrees and orders passed against an Indian soldier serving under war conditions (s. 10); and for making such an application, the time during which such soldier has been serving under war conditions since the 4th of August 1914, shall be excluded from the period of limitation (s. 11).

10. The Usurious Loans Act.—The first breach in the castle of usury was made by the enactment in 1899 of ss. 16 and 19 of the Indian Contract Act; but the utility of the amendment was much circumscribed by the fact that it was only when the ground of undue influence was made out that any relief was given, and, secondly, the word "unconscionable" in s. 16 of the Indian Contract Act was construed by the Courts in the technical sense which it had acquired in English equity. The present Act aims at breaking the back of the Indian usurer, by proceeding on the lines suggested by the Money Lenders' Act (63 & 64 Vic. c. 51), s. 1, and empowering the Courts to re-open transactions by way of money or grain in cases when they are satisfied (1) that the interest or other return is excessive, and (2) that the transaction is substantially unfair. In such cases, the Courts may (1) re-open the transaction, take an account between the parties, and relieve the debtor from payment of excessive interest; (2) re-open any account already taken between the parties; or (3) set aside, revise or alter any security given on agreement made between the parties in respect of any loan (s. 3). The only limit to the exercise of this power is that (1) the Court cannot re-open a transaction more than six years prior to the date of the transaction in suit or (2) to disturb the decree of a Court (s. 3 proviso). It is competent to the Court to exercise these powers to the admission or amount of a proof of a loan in any insolvency proceedings (s. 4).

11. The Indian Army (Amendment) Act.—The Indian Articles of War Act of 1845 was the first graphic piece of Indian legislation on the subject. It was superseded in 1911 by the Indian Army Act, VIII of 1911. Both these Acts were conceived and worked in times of peace. The existence of an extensive war for upwards of three years has discovered a number of defects in the Act, which are sought to be remedied by this Act. First of all, occasion has been taken to delete the term "native" and to replace it by the term "Indian" which has been rendered legally possible by the Government of India Act, 1915. The "Army Corps" which was not known to Indian Military authorities when the Act of 1911 was passed, is now recognised and given its place throughout the Act. Attempts to commit offences are penalised in s. 39 A. If a person on active service is sentenced by Court-martial to dismissal or to transportation or imprisonment whether combined with dismissal or not, he may still be retained to serve in the ranks (s. 49A). When a person is tried and sentenced by Court-martial on board a ship, the sentence if not executed on board the ship may be executed as if he had been tried at the Court of disembarkation (s. 99A). An offender sentenced to transportation is, until he is transported, to suffer rigorous imprisonment (s. 108A). and a sentence of fine is to be levied as if it was a sentence of fine imposed by a Magistrate (s. 111A). Section 112 deals with pardon and remissions; and ss. 126A and 126B have been enacted to enable the Court to pass orders for custody of property pending trial in certain cases.

12. The Indian Companies Restriction Act.—This is purely a war measure and has to be justified only as such. To carry on the successful prosecution of the war it is found necessary to husband the resources of the Indian money-market, by empowering the Government of India to exercise control over fresh issues of capital. It is therefore provided that Registrar of Joint Stock Companies shall not register a company, nor shall a company, increase its share capital, issue debentures or call up unpaid capital, unless the company

olds a license in this behalfissued by the Gover-
or General in Council (s. 3). Any contract
nade for the purpose of increasing share capital
r for the issue of debentures, in contravention
f s. 3 are void and any call made by a company
n contravention of it are unenforceable (s. 4).

13. The Indian Paper Currency Act.—
This is essentially a war measure. Hitherto, the
Paper Currency Reserve could legally remain
n silver or gold coin or bullion in transit
o and from India in certain circumstances.
But war has changed the venue of purchase
f silver from London to New York. It is
herefore enacted that during the continuance
f the war and for six months thereafter,
uch Reserve can also be (1) in silver
eld in the United States of America on behalf
f the Secretary of State for India in Council
r the Governor General in Council; or (2)
n silver in course of transmission from the
Jnited States of America, which was at the
ommencement of such transmission or at any
eriod thereafter held as aforesaid.

14. The Gold Coinage Act.—In June
918, the Government of India promulgated
n Ordinance legalising the issue of gold
ohurs valued at Rs. 15 each in India.
hese coins were accordingly minted and set
ito circulation in the wheat growing districts
f the Punjab. The provisions of that Ordinance
ave been enacted into an Act. Since then,
is Majesty's Mint at Bombay has been
inting sovereigns and for the time being the
old mohurs have ceased to be minted. The
ct fixes the weight of a gold mohur at 123.
7447 grains troy, mixed in the proportion of
of fine gold and $\frac{1}{12}$ of alloy (s. 4). These
old mohurs remain a legal tender so long as
ney do not lose their weight below 122¼ grains
are not defaced (s. 6). Sections 7 and 8
ve the power to cut (1) diminished or defaced
ins; and (2) counterfeit coins. No suit lies
gainst any person who in good faith does
ything in pursuance of the Act (s. 12).

15. The Enemy Trading Orders (Validation) Act.—Though the Enemy
rading Ordinance, 1916, has been repealed
y the Enemy Trading Act, X of 1916, it thought
dvisable to preserve the operation of the
nemy Trading (Winding up) Order 1916,
nd the rules, etc., issued under the repealed
rdinance. The purpose of this Act is to keep
em in force.

16. The Provisional Collection of Taxes Act.—This Act is drawn on the
nes of the British Provisional Collection
Taxes Act, 3 Geo. V, c. 3. It applies
nly to Financial Bills introduced by a
ember of the Executive Council of the
overnor General. It provides that when a
ill is introduced in the Indian Legislative
ouncil by a member of the Executive Council
the Governor General, and such Bill provides
r the imposition or variation of any tax in
e nature of customs or excise duties, and there
inserted therein a declaration that it is
pedient in the public interest that the Bill
ould have temporary effect under the provi-
ons of this Act, the Bill shall, for the period
ated by this section and subject to the
ovisions of this Act, have effect from the
te of its introduction as if it were an Act of
the Governor General in Council (s. 2). But where such an Act as above described ceases to have effect, any money paid in pursuance of the Bill shall be repaid or made good (s. 3). This measure has been largely necessitated by the introduction of a number of Acts passed to raise the revenue to meet the increased expenses consequent on the war.

17. The Indian Non-ferrous Metal Industry Act.—Like the foregoing Act this enactment also proceeds on the lines of an English Statute, *viz.*, the Non-ferrous Metal Industry Act, 1918. It is passed with the object of preventing the subjects of States at present at War with His Majesty from obtaining control during the period of the war and for five years thereafter over any business in connection with certain non-ferrous metals and metallic ores. The prohibited commodity consists of zinc, copper, tin, lead, nickel and aluminium and other ores. It is to remain in force during the continuance of this war and for a period of five years thereafter (s. 1). It enacts that it shall not be lawful for any person, after the expiration of six months from the commencement of this Act to carry on any business of winning, extracting, smelting, dressing, refining or dealing of non-ferrous metal or ore without a license (s. 4). Section 5 gives power to call for information from and to inspect the documents of a licensee or an applicant for a license to ascertain the nature of the business or constitution of the company or firm with a view to determining whether it is or it is not controlled by a subject of the present enemy states. An Indian company can give notice requiring holders of share-warrants to bearer to surrender them for cancellation and to have their names registered (s. 6). It can go also give notice requiring a share-holder or debenture-holder to make a declaration as to the beneficial ownership of the shares and debentures standing in his name (s. 7). Offences under the Act are made punishable with imprisonment which may extend to three months or fine which may extend to Rs. 200 (s. 9); but no prosecution can be instituted without sanction of Local Government (s. 10).

18. The Indian Army (Suspension of Sentences) Amendment Act.—This is a purely military measure. Its chief provision is that where an offender is, whilst a sentence is suspended under this Act, sentenced for any other offence, then, if the further sentence is also suspended under this Act, the authority ordering such suspension, may direct that the two sentences shall run either concurrently or consecutively, provided that the aggregate term does not exceed fourteen years (s. 3).

19. The Indian Defence Force (Further Amendment) Act.—This Act enables the enrolment of European British subjects above the age of fifty years for general military service or local military service (s. 11A).

20. The Indian Companies (Foreign Interests) Act.—The English Statute known as the Companies (Foreign Interests) Act (7 and 8 Geo. V. c. 18) has been the model on which the present Act is framed. Its object is that companies which, during the war, have been reconstituted in India on lines approved by the

Government of India and of the British Empire as a whole, should be restrained from altering their articles of association in such a way as to bring them under the control of foreign interests. It is therefore enacted that the provisions in the above respect should not be altered without the consent of the Governor General in Council; nor can such a company be wound up voluntarily without the consent as aforesaid.

21. The Indian Defence Force (Foreign Service) Amendment Act.—The purpose of this short amending Act is to provide that certain persons deemed to be enrolled under the Indian Defence Force Act shall be liable to serve as well without the limits of India as within those limits.

22. The Bronze Coin (Legal Tender) Act.—The Bronze coin at present in use in this country are pice and pies. They were minted at His Majesty's mint at Calcutta. But owing to pressure on that office of war conditions, it has not been feasible to mint these coins in any sufficient quantity. At the same time, the generous offer made by the Government of His Exalted Highness the Nizam of Hyderabad, to mint the bronze coin for the Government of India at the Hyderabad Mint has made it practicable for the Government of India to utilise the resources of the mint. But under the Indian Coinage Act of 1906, only the coin minted at His Majesty's mint in India are legal tender. To remove this inability, the Act is passed to make coins minted at mints outside British India at the request of the Governor General in Council legal tender in British India.

23. The Cotton Cloth Act.—No measure passed at the current session of the Imperial Legislative Council has caused such animated discussion as this Act. It has been hailed on the one side as affording relief against the exorbitant prices of cotton cloth, which are primarily brought about by the conditions of war but are yet alleged to be mainly responsible to the heavy speculation of a few cloth merchants. It is attacked on the other side as needlessly interfering with a person's right to carry on his business. Whatever be the truth it is tolerably certain that the high prices of cloth have affected the poor classes considerably, and they are sure to be much relieved by the operation of this Act. The scheme of the Act is shortly this. The Governor General in Council has the power to appoint one or more Controllers (s. 3), who are empowered to pass orders for the purpose of encouraging or maintaining the supply of standard cloth at reasonable rates to the poorer classes of the community (s. 4). They may also declare and define the classes of standard cloth; prescribe distinctive indications to be woven into or impressed on the standard cloth; require any person who ordinarily manufactures cotton cloth to manufacture a prescribed quantity and quality of standard cloth; and fix the prices to be paid to the manufacturer for standard cloth (s. 4). The Controllers will be assisted by Advisory Committees consisting of persons having knowledge of the cotton or cotton cloth trade and appointed by the Governor-General in Council (s. 5). When the Controller has directed a manufacturer to manufacture standard cloth and has fixed the price therefor, the manufacturer shall deliver the same at such time and place and in such manner as the Controller may specify from time to time and the Controller shall pay to the manufacturer the said price, together with the profit if any actually paid by the manufacturer (s. 6). Disobedience to the Controller's orders is made punishable with imprisonment which may extend to six months, or with fine or with both (s. 8). The price at which the standard cloth is to be sold shall be fixed by the Local Government (s. 9); and the sale of cloth can be made at the prices fixed by Government and by persons duly licensed in this behalf (s. 10). No suit, prosecution or other legal proceedings hall lie against any person for anything done in good faith under this Act (s. 13).

Imperial Legislative Council.

The first meeting of the Imperial Legislative Council during the year was held at Delhi on February the 6th. Following the general practice, His Excellency the Viceroy opened the session with a long speech generally reviewing the position of affairs. He referred at the outset to the "gross outrage so recently perpetrated upon the peaceful Moslem population of Shahabad and certain neighbouring areas. I speak not only for myself but for the Government of Bihar and the Government of India and I am sure that I carry with me the whole of my Council and I hope the great mass of Hindu opinion as well when I say that those outraged people have our best sympathy." The Viceroy also alluded to the various commercial expedients which had been forced upon the Government by the prolongation of the war. He explained that whilst hitherto India had not felt the burden and suffering which war brings in the houses of the poor with anything like the same severity as less favoured countries nearer the main theatres of operations, the pinch was being felt and one of the matters which had given Government cause for the most anxious consideration had been the recent rise in the price of many of the necessities of life. Educationally, the greatest event was the meeting in November of the Calcutta University Commission. At the other end of the scale Government had determined to place no obstacle in the way of local legislation designed to stimulate the spread of primary education. Militarily an added burden had been thrown on the Allies by the situation in Russia, and India had to be prepared for greater efforts and greater sacrifices and for a fuller organisation of her military resources in manpower and in material. For this sustained efforts in the direction of recruiting were required. A stream of gifts and contributions from the Native States was still flowing strongly. Adverting to the **Reform Scheme**, the Viceroy spoke of the efforts which he had made in co-operation with the Secretary of State to ascertain the opinions of all classes in the country. Following the precedent adopted by Lord Morley, the scheme would be submitted to the public for discussion.

The Finance Member introduced the Indian **Income Tax** Bill designed to consolidate and simplify the general law relating to the levy of income tax in India. The Maharaja Sir Manindra Chandra Nandi at once raised a point which dominated the discussion of the Bill, namely, whether incomes arising from agricultural sources should be taken into account in determining the rate of assessment. He put his point in the following words: "I feel it my duty to enter my humble protest against section 4 of this Bill which, under cover of a graduated scale of tax, is likely to contravene the very spirit of Lord Cornwallis's understanding with the owners of permanently settled estates. Section 4 of the Bill under discussion provides that the net amount of the agricultural income in excess of Rs. 1,000 received by any particular assessee in the year of assessment should be taken into account in determining the rate at which the tax shall be levied, thus laying him open to be assessed as a landlord at a higher rate than at present." This point was discussed by almost all the members who spoke upon the Bill and generally endorsed by every member from an agricultural constituency and particularly from a permanently-settled tract. The Finance Member promised that this point should be taken into consideration by the Select Committee. Sir James Du Boulay introduced the **Cinematograph** Bill which provided for two objects. The first the safety of the audience and the other to prevent the exhibition of objectionable films. The Bill was referred to a Select Committee. Sir Claude Hill introduced a Bill to remedy minor defects found to exist in the **Forest Act** during the past seven years and said that the Department was entitled to congratulate itself in that the amendments were practically only three in number. Rao Bahadur B. N. Sarma proposed the following resolution: "This Council recommends to the Governor-General in Council (*a*) the **redistribution** of provincial areas and the constitution of provinces, where necessary, to secure complete success for self-governing institutions in British India; (*b*) the rearrangement of provincial areas on a language basis wherever and to the extent possible, especially where the people speaking a distinct language and sufficiently large in numbers, desire such a change." The discussion on this resolution threw an interesting light on the heterogeneous character of the Provinces of India. The main purpose of the resolution was to group the Provinces on a linguistic basis. The mover dismissed as beyond the realms of possibility the inducing of the people of India to adopt one language even in the very remote future. India, he said, has had a central Government for ages but its past history as well as the history of the peoples in the world in general did not encourage the hope of a universal language. After a century of British rule the number of English-knowing Indians was but one and a half millions amongst 14 millions of literate people. To expect the people of India to give up the mother tongue seems to be a wild dream and he dismissed it from consideration. Now the very nature of representative institutions involved an independent appreciation by the people of the problems of legislation, administration and finance. He asserted that in non-official organisations when the medium employed was English the assemblies were composed almost wholly of English-educated Indians but during the past ten or fifteen years in his own part of the country as soon as the use of the mother tongue came into general vogue at the Provincial Conferences and began to be almost exclusively employed, the assemblies had been composed of all the strata of society and had become large real and living centres of activity. If the Provinces were not grouped on a linguistic basis it would be necessary to conduct the proceedings in English and large numbers of members would have to sit and listen to speeches which they did not understand. The discussion

showed a wide diversity of opinion. Sir Hamilton Grant said that if they were to have governments formed on linguistic division they would have to have local governments every twenty miles. What they wanted was a lingua franca for the whole of India. Hindustani at one time tried to be this but Hindustani was now approximate to English. He deprecated any haste in the matter of the redistribution of the Provinces. This view was very substantially endorsed. It was crystallised in a passage in the speech of Khan Bahadur Mian Muhammad Shafi who said "While a slight readjustment here and there may be desirable, the game of 'General Post' which my Hon. friend Mr. Sarma advocates, and which has also been advocated in certain other quarters, namely, the partition of our existing provinces into small Provincial States, 30 to 40 in number, is one which, in my humble judgment, is in the highest degree impracticable, and, in view of the heterogeneous character of our population is likely to be highly injurious to the best interests of the country. There is, within the British Empire, no precedent for it. Australia with its territorial extent of three million square miles is divided only into six colonies or provinces. Canada with its area of three million and a half square miles is divided only into seven. The advocates of this scheme would divide India with its area of one million and a half square miles into 30 to 40 small States" Dr. Tej Bahadur Sapru said the question would lead to endless controversy and discussion all over the country and the danger that instead of accelerating or expediting constitutional reform it would seriously retard the introduction of such reforms. Mr. Srinivasa Sastri asked Mr. Sarma to forbear from complicating the situation. When responsible government came whether it came at the end of 20 or 30 years then the time might be ripe for a discussion to propose to chip and chop the provinces but for the present let them walk warily so far as the rearrangement of the Provinces was concerned. The resolution was negatived.

The **Usurious Loans** Bill was referred to a Select Committee. Sir Claude Hill moved for permission to introduce a bill for the levy of a cess on **indigo** exported from British India. He said that the chief advantage claimed by consumers for synthetic indigo over the natural product lay in the fact that synthetic dyes were prepared in the form of a standardised paste which was more convenient for consumers. Owing to the restricted supply of the synthetic product a considerable demand for the natural indigo had arisen and it seemed to Government worth while to take steps to see whether by chemical methods or otherwise it might not be possible to restore natural indigo to the place of prosperity which it occupied before synthetic indigo threatened to kill it. The Bill proposed to levy a cess at the rate of one rupee per maund of 82⅔ pounds for the purpose of supporting the necessary staff. Sir William Meyer introduced the **Indian Coinage** Bill to substitute a nickel two-anna piece for the silver two-anna piece at present current. He said that the silver two-anna piece had always been looked upon as a troublesome little coin: it was easily lost and wore more rapidly. The marked popularity which the nickel anna had obtained augured well for the success of a nickel two-anna piece.

Rao Bahadur B. N. Sarma introduced the following resolution: "This Council recommends to the Governor-General in Council that the Government may be pleased to accept and declare **total prohibition** of the use of all alcoholic and intoxicating liquors and drugs to be the aim and object of its policy and so to direct its administrative methods as to achieve the end in view at an early date." It was generally supported by all the Indian members of the Council. The mover said the changes he was suggesting did not necessitate any vital departure from the existing policy except in certain essential particulars and would not reduce the revenue to any appreciable extent in the immediate future. But he wished Government to accept the principle of total prohibition as the goal of their excise policy. The official answer was that very large numbers of the Indian population were not yet ready for total prohibition and any attempt to introduce this policy or important steps leading to this policy would only encourage illicit distillation which was much worse for the people than a controlled traffic. The resolution was negatived by 33 votes to 20. Sir William Vincent presented the report of the Select Committee on the Cinematograph Bill. Sir Claude Hill presented the Indian Forest Amendment Bill which was passed. Sir Hamilton Grant introduced a Bill to amend the law to provide for the administration of criminal justice in **Aden,** the sole object of which was to give the Bombay Government the power to appoint another official for the despatch of judicial functions without in any way altering or extending those functions. It was agreed to.

Mr. Kamini Kumar Chandra introduced the following resolution: "This Council recommends to the Governor-General in Council that the jurisdiction of the Calcutta High Court be extended or rather re-extended to the British portion of the **Khasia and Jaintia Hills** in the Province of Assam." Sir William Vincent claimed that this was a matter of provincial or rather parochial interest and should be dealt with in the Provincial Council rather than brought before the Imperial Council. It was defeated by 38 votes to 9. Mr. Sastri moved a resolution on the subject of the recruitment for the **public works** department and the railway engineering services in the following terms: "This Council recommends to the Governor-General in Council that the Government of India do recommend to the Secretary of State for India that the recruitment for the Public Works Department and the Railway Engineering Service excepting the proportion of posts reserved for Royal Engineers be made within a reasonable period of time, wholly in India." Mr. F. C. Rose remarked that the curtailment of the European element must necessarily be gradual as it was essential that the great engineering works in India so vital to the general progress of the country should be efficiently maintained and that new works should be energetically pushed under the best skilled engineering advice it was possible to obtain. Engineering problems of importance

were likely in the near future to demand even greater skill in their conception and design than in the past. In irrigation for instance the easier and more straightforward works had been completed and in future great engineering skill and talent would be required to solve the many problems that would arise. Mr. Sastri acknowledged the fairness and clearness with which his proposal had been met. The resolution was then negatived. Mr. Sastri moved the following resolution on the **appointment of Indians** to services recruited in India: "This Council recommends to the Governor General in Council that: (*a*) immediate steps be taken to ensure that Indians are appointed to the great majority of the posts in the services ordinarily recruited in India and (*b*) the educational qualifications prescribed for admission into these services should be sufficiently high and the same for all candidates irrespective of their creed or race." Sir William Vincent gave figures showing that a very great advance in Indianising the services recruited in India had been made and that in fact the advance already made satisfied to a great extent the test contained in the first part of the Resolution for many services, and that if regard were paid to the recruitment of Indians in recent years the position was still more satisfactory. In the course of discussion an interesting statement was presented by Nawab Ally Chaudhuri showing the position of Mahomedans in the Public Services of Bengal. It was to the following effect: "In Bengal, the percentage of various communities represented in the graded posts ranging from Rs. 200 and onward to Rs. 1,000, the figures come to something like the following:—Posts on Rs. 200 to 300—Europeans 4 per cent., Anglo-Indians 8 per cent., Hindus 74 per cent., Mahomedans 13 per cent., Indian Christians 1 per cent; Rs. 500 to 600—Europeans 51 per cent., Anglo-Indians 1 per cent., Hindus 43 per cent., Mahomedans 5 per cent., and Indian Christians nil; Rs. 600 to 700—Europeans 35 per cent., Anglo-Indians 4 per cent., Hindus 58 per cent., Mahomedans 3 per cent., and Indian Christians nil; Rs. 900 to 1,000—Europeans 94 per cent., Anglo-Indian nil; Hindus 6 per cent., Mahomedans nil and Indian Christians nil. This is indeed a record. That is to say, in a Province where the Mahomedans are 52·2 per cent. of the whole population, the proportion of Mussulmans in the Public Services is deplorably low, amounting in the grades between Rs. 600 and Rs. 800 to only 3 per cent.; in the grade from Rs. 800 to 900 to 2 per cent. and in that from Rs. 900 to 1,000 to nil per cent." The resolution was negatived.

Mr. Sastri moved the following resolution on the recruitment for the **technical and scientific** services being made entirely in India: 'This Council recommends to the Governor-General in Council that it be represented to the Secretary of State for India (*a*) that, as recommended by the Public Services Commission, the technical and scientific services should be recruited entirely in India and that in order to secure officers with the necessary technical knowledge a determined and immediate effort should be made to provide in India the requisite educational facilities; (*b*) that steps should be taken to discontinue recruitment in Europe for these services within a period of ten years; (*c*) that, pending the development of educational facilities in India, promising candidates should be sent to Europe and America for study at the expense of the State and appointed to the higher posts, if duly qualified; and (*d*) that, to attract a proper type of candidate to the technical institutions of India, an undertaking be given by Government that not less than one-half of the recruits shall be chosen from their alumni." In the course of the discussion Raja Rampal Singh said it was incumbent upon Government to take very early steps to provide educational facilities for the acquirement of the best technical and scientific knowledge in the country and to create great attractions in that direction and until those facilities were provided to make provision by state scholarships for the study of those branches of education in foreign countries. Mr. Sastri said that the statement of Government policy by Sir Claude Hill had met him in such a way that he wished to withdraw his resolution.

Sir William Meyer introduced the **Finance** Statement which will be found dealt with in detail under the heading of Finance (q. v.). The essential features of the Financial Statement are contained in the following extract: "The general situation I have now to describe is in many ways similar to that outlined in my speech last year. The revenue position is again excellent. Our Railway receipts have once more broken the record, and far exceeded the figure estimated in the current year's budget. The result is that we are able to face with equanimity a considerable increase in military charges. Our financial embarrassments as I shall presently show are mainly due to ways and means questions. We have had to incur here on behalf of His Majesty's Government constantly increasing expenditure which is repaid to the Secretary of State at home. Simultaneously there is a serious and growing demand on our resources to finance the shipment of materials required for the prosecution of the war and of the food-stuffs which the Allies and many portions of the Empire are drawing from India." Arising out of the Budget Sir William Meyer introduced the Indian Paper Currency Amendment Bill taking powers to increase the permissible specific investment against the British Treasury Bills by 24 crores (16 millions).

Sir William Meyer introduced the report of the Select Committee on the Bill to consolidate and amend the law relating to **income tax.** The Cinematograph Bill was passed. The **Indian Army** Amendment Bill was introduced by Major-General A. H. Bingley for the purpose of giving Government greater discretion in dealing with military offences and was referred to a Select Committee. The **Indigo cess** bill and the Indian Coinage Bill and the Criminal Justice (Amendment) Bill were passed.

Mr. Sastri moved the following resolution on the inclusion of certain subjects in the Civil Services Examination: "That this Council recommends to the Governor-General in Council that the Secretary of State for India be requested to include **Indian History** and Persian, Arabic and Sanskrit among the subjects for the

examination for the Indian Civil Service." After a protest by Sir Dinshah Edulji Wacha against the retention of the classics instead of living languages the Resolution was accepted. Mr. Sastri moved the following resolution on the **Civil Medical Service:** "This Council recommends to the Governor-General in Council (*a*) that a civil medical service should be constituted which should be wholly independent of the medical organisation of the Indian Army; that the higher medical posts which are at present filled by officers of the Indian Medical Service should be transferred to the Civil Medical Service; and that the civil medical service should be recruited from the civil medical officers and the independent medical profession; (*b*) that the salaries of Indian Medical Service officers employed on civil duty should not be enhanced as recommended by the Public Services Commission; and (*c*) that military assistant surgeons should not be given preference over civil assistant surgeons, and that not more than one-sixth of the higher posts reserved for subordinate medical officers should be given to them." Surgeon-General Edwards claimed that the resolution was tantamount to the abolition of the Indian Medical Service and he did not think that the Council was fully aware of the extraordinary value of this service not only to India but to the world at large. He set out this service in the following terms; "I may begin by saying that no less than 34 members of the Indian Medical Service have gained that blue ribbon of the scientific world, the Fellowship of the Royal Society. This Service has worked out the life history of the malarial parasite, a discovery which has revolutionised our ideas concerning malaria and which, among other things, has enabled the Panama Canal to be successfully built. It has reduced the mortality of cholera by two-thirds and shorn amoebic dysentery of most of its terrors, liver abscess, as a consequence, is no longer feared. It has worked out the method of transmission of bubonic plague, work which points the way to the ultimate eradication of that disease. Indian Medical Service officers have discovered the cause of relapsing fever and its means of transmission. Enlarged prostate, that terrible and fatal concomitant of old age, can now be overcome, thanks to a member of the Indian Medical Service, and it was again an Indian Medical Service officer who invented the method of evacuating stone, in the bladder, by crushing. The work of Indian Medical Service men in the domain of eye surgery, more especially with regard to cataract and glaucoma, is recognised throughout the scientific world. This service discovered the origin of that dread disease Kala Azar which is now no longer incurable. We are carrying out extensive investigations into ankylostomasis, a disease which is costing India millions of pounds a year, and also into bilharziosis, which now threatens to invade India. Very important contributions to the knowledge of the world concerning snakes and their venom have been made and are being made by this service. An Indian Medical Service Officer is the greatest living authority on goitre. I may also mention the valuable work done on short fevers and the method of transmission of disease by "carriers" which is of such world-wide importance. All this may be known to the Hon. Mr. Sastri, but if so, it seems to me another case of a prophet not being without honour, save in his own country. The Hon. Member will no doubt say that all this can be done by the Service he proposes to create but I doubt it." Sir William Vincent drew attention to the increased proportion of Indians passing into the Indian Medical Service. The resolution was negatived by 35 votes to 15.

In the discussion of the Financial Statement Maung Ba Too urged for a greater expenditure in Burma. Sir Gangadhar Chitnavis said that the country would not cavil at the financial arrangements, the object of which had been to render on behalf of India all possible help to His Majesty the King in the prosecution of the war without weakening the internal administration and the financial credit of the country. Sir Fazulbhoy Currimbhoy acknowledged the measures taken to increase the credit of India, to open opportunities to the small investors, to expand the note circulation, to use Government balances for financing trade and to provide for the paper currency depreciation fund. The Raja of Kanika hoped that the end of the war would see a renewed attempt to revitalise their schemes of education and sanitation.

The general discussion on the Financial Statement having been completed the Council proceeded to the consideration of specific resolutions on specific heads. The first of these was moved by Rao Bahadur B. N. Sarma to the following effect: "That this Council recommends to the Governor-General in Council an increase in the recurring appropriation from Imperial revenue of 30 lakhs towards **primary education** by another thirty lakhs for expenditure from the year 1918-19 onwards on the development of education in (*a*) Mechanical, electrical and sanitary engineering, (*b*) Metallurgy, (3) Mining, (*d*) Forestry, and (*e*) Agriculture." The Finance Member in explaining the official position said that on the figures in the financial statement he could make no further grant but he might on the final budget figures if they showed a better position than they had been able to assume. If that proved to be the case, subject to the sanction of the Secretary of State, he was prepared to set aside such sums not exceeding Rs. 30 lakhs as might seem desirable for purposes of technical and agricultural education. In these circumstances the resolution was withdrawn.

Rao Bahadur B. N. Sarma next moved that "This Council recommends to the Governor-General in Council that a grant of 50 lakhs of rupees may be made in aid of **sanitation**, especially towards the supply of pure drinking water in rural areas. The Finance Member, whilst expressing his entire sympathy with the purport of the resolution, said he could not accept it because although a surplus was provided for it was needed for their ways and means purposes in connection with the war and he could not dissipate it further. The resolution was withdrawn.

Rao Bahadur B. D. Shukul moved "This Council recommends to the Governor-General in Council that the sum provided in the budget

under the head of education for the Central Provinces be increased by rupees four lakhs for the establishing of a **University at Nagpur.**" The Education Member said that the Government desired the establishment of the Nagpur University at a very early date. The only reason for the delay was that Government was waiting for the report of the Calcutta University Commission. The motion was withdrawn.

Pandit Madan Mohan Malaviya moved a resolution that the enhanced passenger fares imposed during the year 1917 should be withdrawn. Sir George Barnes pointed out that India in the way of travelling facilities as in every other way was suffering less than any part of Europe and of any of our Allies with the exception of Japan and he could not accept the resolution which was negatived.

On the motion of the Finance Member the Indian Paper Currency Amendment Bill was passed.

The Finance Member introduced a bill to control the **withdrawal of capital** from the money market by Companies during the war so as to concentrate all their resources on war measures.

The Home Member introduced a bill to consolidate and amend the law to provide for the special protection, in respect of civil and revenue litigation, of **Indian soldiers** serving under war conditions.

Rao Bahadur B. N. Sarma moved a resolution that this Council recommends to the Governor-General in Council that the **land revenue** should be wholly provincialised. The Finance Member said he could not accept the resolution in the form in which it stood but was prepared to accept one in the following terms : " This Council recommends to the Governor-General in Council that in revised financial arrangements with the Provinces consequent on a scheme of constitutional reforms, the question of wholly provincialising the land-revenue be taken into consideration ". The mover altered the form of his resolution to the following : " This Council recommends to the Governor-General in Council that in revised financial arrangements with the Provinces, consequent on a scheme of constitutional reforms, the question of wholly provincialising the land revenue be taken into consideration," which was accepted.

Rao Bahadur B. N. Sarma next moved the following two resolutions : 1. This Council recommends to the Governor-General in Council that one of the post-war reforms should be the introduction throughout British India of **free and compulsory primary education** immediately after the war. 2. This Council recommends to the Governor-General in Council that if the land-revenue be not wholly provincialised, the Government of India should undertake to finance free and compulsory primary education out of Imperial revenues. The Education Member, Sir Sankaran Nair, said Government were not prepared to introduce compulsion but were prepared to do all they could to extend the existing system of primary education. In fact they had considerably extended it in the last few years. The number of pupils had increased and they expected in the present year to have more than eight million persons at school. The cost of the scheme would be not less than from ten to twelve crores of rupees annually. In the course of the debate considerable dissatisfaction was expressed by Indian members with this policy. The Finance Member pointed out that it was inconsistent of the mover to harp on provincial autonomy and on federalism and at the same time to insist on an immediate programme of free and compulsory primary education which gave the local governments and the local bodies no option in the matter. The resolution was defeated by 43 votes to 12.

Pandit Madan Mohan Malaviya moved the following resolution on the reorganisation of the police : " This Council recommends to the Governor-General in Council that the Government of India should recommend to the Secretary of State for India (1) that the age-limits for the examination for admission into the Indian Police Service be raised from 19-21 to 21-23 ; (2) that the pensions and salaries of officers of the Indian Police Service should not be enhanced, as has been recommended by the Public Services Commission ; (3) that the rule which requires that candidates for the examination for the Indian Police Service shall be of pure European descent should be abrogated ; and (4) that the said examination should be held simultaneously in India and in England ; or, if the last recommendation be not accepted, that not less than one-half of the total number of posts in the **Indian Police** Service should be recruited by an open competitive examination held for the purpose in India." Lieut.-Colonel S. L. Aplin said the effect of the proposals would be the elimination of British Officers from the higher ranks of the police and the substitution in their place of Indians, not men whose capacity had been tried, but young men whose only known qualification would be that they possessed sufficient literary aptitude to enable them to pass the examinations. The resolution was negatived.

The Finance Member introduced the report of the Selection Committee on the Indian **Income-Tax** Bill. There was an animated discussion revealing an interesting cleavage of opinion on the section of the bill which made Indian income-tax arising from agricultural sources liable to computation in fixing the incidence of the tax. This met with very strong criticism from the representatives of the landed community. Government left all official members open to vote as they pleased, with the result that on a division the clause was excised by 30 votes to 25. The bill was then passed.

The Commander-in-Chief introduced a bill to amend the Indian **Defence Force** Act of 1917 to remove the existing restrictions on enlistment so as to enable Government if necessary to extend the Indian units of the Force as suitable men offered themselves for service and as the military situation demanded. The bill was warmly approved and passed.

Mr. Sastri moved " This Council recommends to the Governor-General in Council that a representation be made to the Secretary of State for India that the maximum **pension**

limits fixed for Civil officers should not be increased." The resolution was negatived. Mr. Sastri next moved: "This Council recommends to the Governor-General in Council that the Government of India do represent to the Secretary of State for India that the cadre of the Indian Civil Service be not increased as recommended by the Public Service Commission". The resolution was negatived.

Rao Bahadur B. N. Sarma moved that "this Council recommends to the Governor-General in Council that the contract with the **East Indian** Railway Company be determined by the 31st of December 1919, and that the State do take over the management of that Railway system on and from that date." The discussion showed a considerable difference of opinion in the Council on the merits of State and Company management for the Indian Railways, the majority of the Indian members favouring State management. The resolution was withdrawn.

Mr. S. N. Bannerjea moved the following resolution on the subject of **internments** under the Defence of India Act: "This Council recommends to the Governor-General in Council that a Committee with an adequate Indian element thereon be appointed in each Province to inquire into and report upon (1) all cases of internment under the Defence of India Act; (2) all cases of detentions under Bengal Regulation III of 1818 and cognate Regulations in Madras and Bombay; and (3) all cases of persons who may hereafter be dealt with under the aforesaid Act and Regulations, the Committee being empowered to make recommendations with regard to the health, allowance, place of detention and other matters relating to the prisoners referred to above." The Home Member said that in view of the feeling on the subject the Government of India were prepared to ask the local governments to appoint a committee consisting of one Indian and one English officer of judicial experience of whom one at least shall be, if possible, a High Court judge or an officer who has served in that capacity again to make careful inquiry into each case, to sift the materials on which the order of restraint or confinement is based, to consider any memorials that are put on behalf of the persons whose cases are under investigation, and to advise the Government whether these orders are justified by this material that is placed before them. Further, this Committee will, in the case of a person for whose detention originally sufficient grounds are proved, inquire, so far as may be possible, whether by his subsequent conduct the detenu has shown such signs of reform or amendment that the removal of restriction imposed on him is possible or whether, by reason of any other circumstances this course is feasible without danger to the public tranquillity. In view of this assurance the resolution was withdrawn. Mr. S. N. Banerjea next moved "This Council recommends to the Governor-General in Council that the Indian Members for the next **Imperial War Conference** be appointed on the recommendation of the elected members of the Imperial Legislative Council." The resolution was negatived by 39 votes to 16.

The Home Member moved that the report of the Select Committee on the Bill give additional powers to courts to deal in certain cases with usurious loans of money or grain be taken into consideration. The Bill was very warmly approved by the Council and passed. Major-General A. H. Bingley introduced the report of the Select Committee on the Bill further to amend the Indian Army Act. He said that he had the authority of the Commander-in-Chief for saying that personally he had no sympathy with **corporal punishment** which he considered was of a degrading nature; at the same time he was fully convinced that it would be highly detrimental to good order and to the interests of military discipline to do anything at the present time which would restrict by legislation the powers which the Military Authorities possessed in this respect but he was prepared after the war to make such recommendations as might be necessary in the light of the experience which had been gained. The Bill was passed. The Finance Member introduced the bill to control the **withdrawal of capital** from the money market by companies. He said there was no intention to prohibit the flotation of those registered companies which came under the scope of the Bill but these flotations must hereafter require the license of the Government of India. In issuing these licenses the following general propositions would be considered. First, was the enterprise likely to attract money which would otherwise go into Government loans and treasury bills? Secondly, if it was likely to attract money which would go to Government might the flotations be allowed as of assistance in the speeding up of war material as being likely to result in increase of other productions which would save tonnage and imports into India. The Bill was passed. The Finance Member presented the **final budget** estimates and said the net result of the changes was to reduce the surplus for 1917-18 by £114,000 and to increase that for next year by £291,000, the surplus for 1918-19 now standing at £2,582,000.

The President in closing the session alluded to the great importance of the new **war loan.** He said the position was briefly as follows. Last year India undertook to contribute one hundred million pounds or 150 crores of rupees to the cost of the war. Of this amount 52 crores had been paid in cash, leaving 98 crores outstanding. It was of enormous importance to India to pay off the balance as soon as possible and on these and other grounds he urged members to make the forthcoming war loan a great success. The Council then adjourned.

The Council reassembled on the 4th September when in the course of answers to questions, Sir William Meyer said that the gross issue of one-rupee notes was Rs. 458 lakhs and of two-and-a-half rupees was Rs. 200 lakhs. The President then addressed the Council at some length and in reviewing the results of the **War Conference** held at Delhi, he said "The material results of the Conference were great but I am almost tempted to think that its moral effects were greater. I had convened the Conference that India might proclaim her unity of purpose in the Empire's cause, and

pledge her fullest service in the prosecution of the war. How well the Conference answered to my call, let its resolutions testify. They proclaimed to all the world that India stood solid for the cause of right which our Empire has made its own; and that much though India had done, she would never rest in putting forth her strength until that cause was triumphant. Since then those resolutions have been translated into fact. Some of us may have chafed at the delay over this or that—a delay in which India had no part. But do not let us forget the overwhelming burden that lay on those at home with whom the ultimate decision rested. One immediate result of the Conference was to call upon India to add half a million men to her Army in the ensuing year. Well might we have shrunk from such an undertaking had not the Central Recruiting Board been already in being. But the Board set itself at once to the task, and over 97,000 combatant and nearly 55,000 non-combatant recruits were enlisted in May, June and July. As for the new units which with the approval of the military authorities at home we set ourselves to raise, the results have outrun our expectations. Of the total number, two-thirds and more have been raised already. I wish I could tell you how many men we have recruited and sent overseas since the beginning of the war; but military reasons compel reticence. This much, however, I can say: we are now recruiting twice as many men in a month as before the war we recruited in a year. This fine record is due to the labours of the Central Recruiting Board, backed by whole-hearted co-operation in the provinces. And now that the increases in the emoluments of our Indian troops and the grant of King's Commissions, long-awaited, and powerfully advocated at the Conference, have been announced, I look forward to a finer record still."

He dwelt at some length on the difficulties of meeting demands for metallic currency and emphasised the waste of India's resources involved in these enormous additions to the metallic currency. Had the money spent in purchasing silver been invested, the interest would have strengthened their revenue and could have been spent to the material advantage of the country. He then reviewed the progress of the Reform Scheme in some detail and summarised Government policy in the following passage: "What I wish to emphasise is this. 'Substantial steps' were promised. In my own heart I am confident that 'substantial steps' are provided in our proposals. We have not kept back something like hucksterers in the market, something which we would be prepared to give as a result of pressure. Everything has been placed on the table for all men to see. In the words of the Report 'We have carried the advance right up to the line beyond which our principles forbid us to go.' But within that line we are prepared to consider criticisms and suggestions. Far be it from me to claim any infallibility for our proposals."

The Finance Member introduced the Provisional **Collection of Taxes** Bill. He pointed out that in the past when financial bills had been introduced increasing the rates of customs duty, provision had been made that the new rates of duty should take effect from the date of the introduction of the bill. This was necessary in order to avoid loss to Government by the passing of goods through the customs or the removal of goods from bond in the interval between the introduction and the passing of the Bill. Even so some loss occurred to Government. The present bill would bring their procedure into line with the action taken by the Imperial Government.

The Finance Member introduced a Bill to provide that silver held on behalf of the Secretary of State for India in Council or the Governor-General in Council might be so held in the United States of America or in course of transmission therefrom be deemed part of the Reserve referred to in Section 19 of the English Paper Currency Act of 1917.

The Finance Member then introduced the Gold Coinage Bill which sets up a **Gold Mint** in Bombay. In explaining the circumstances which had led to the solution of a long controversy he said "The present Bill, as in the case of the Currency Bill which I have just introduced, merely continues the provisions of an existing Ordinance. I think that most Honourable Members are probably familiar with the circumstances in which the issue of that Ordinance was required and the circumstances which have necessitated this measure are fully explained in the Statement of Objects and Reasons. Under the powers which we took last year to acquire gold coin and bullion imported into India, we secured a very substantial quantity of this metal. A good deal of this, however, came into India in the form not of sovereigns, but of foreign coin and bullion. In that shape it could not be utilised by us immediately when necessary for currency purposes, and we consequently put in train arrangements for the coinage of sovereigns at a branch of the Royal Mint to be established in Bombay. Owing, however, to the non-arrival of the necessary dies and other causes, a delay greater than was anticipated occurred before it was possible to commence the coinage of sovereigns. Meanwhile, owing to the depletion of our rupee stocks, it became necessary for us to take steps to convert some portion of our gold bullion into coin as expeditiously as possible. We consequently decided as an interim arrangement to coin gold mohurs or fifteen-rupee gold pieces. As we explained at the time, the standard weight, fineness and dimensions of the gold mohur correspond exactly to those of the sovereign, and it is full legal tender at Rs. 15 per gold mohur. The only difference between our mohur and the sovereign is in the designs which it bears on its obverse and reverse. It will have been seen from a Press Communique published recently that we have now commenced the coinage of sovereigns at the branch mint. Meanwhile our gold mohurs have been very useful to us, as we have employed nearly £400,000 worth of them in the purchase of wheat, while in addition to those actually issued, we have a coined up stock of £1,720,000 worth. I do not know whether it will again be necessary during the course of the war to resume the coinage of mohurs, but even if this is not the case, it will be necessary for us to continue the

legal tender character of the mohurs which we have actually issued or which we may be issuing in future."

The Commerce Member introduced a bill to restrict temporarily the persons who may engage in business connected with certain **non-ferrous** and metallic ores. The object of this bill was to prevent these metals from passing under enemy control. The Law Member introduced a bill to amend the Provincial **Insolvency Act** of 1907. This was an Amending Act somewhat complicated in form.

The Commerce Member introduced a bill to take powers to provide for the cheap supply of **cotton cloth** to the poorer classes of the community. He said that in addition to the natural forces which had raised the prices of cotton cloth there had been a great deal of speculation. The object of the bill was to give Government the power to require the mills in India to manufacture certain standard varieties of cloth in common use amongst the poorer classes and to sell them at controlled prices. The Bill met with a certain amount of opposition from the representatives of the mill industry but was warmly approved by the other members of the Council.

Mr. V. J. Patel introduced the **Hindu Marriages** Validity Bill. He said that under the existing Hindu law parties to a Hindu marriage must be of the same caste, otherwise the marriage was invalid unless it was sanctioned by custom. This entailed serious hardship in individual cases. Proceeding, he remarked that "the necessity for a change in the present law is felt in many quarters. The most orthodox even know how difficult it often becomes to find a suitable match for their daughters and sons within their caste, and there are so many ill-matched unions resulting in violations of marital duties, miseries and social tragedies, how sisters and brothers compete to catch such a match for their children and quarrels arise between them and they become life-long enemies; how widowers and men of advanced age either marry little girls or remain unmarried and deviate from the paths of healthy moral life, the influence of which on their children and surroundings they do not think of or care for. Lest a suitable match may be reduced by another, marriages are hurried sometimes regardless of all good feelings and fine human sentiments. Sales, purchases and exchanges of brides and compulsory dowries are disliked even by many of the orthodox of the caste; but they are helpless. They cannot create a local or special custom which a Court might recognise. Moreover, there are doubts regarding several castes as to which primary caste they belong to. There are castes, which in one province are classed among one primary caste, while the Court in another province has classed them among another primary caste. Many castes having been formed out of mixed marriages, there will aways be a dispute and difficulty on this question, and the question will always remain open in cases where one of the parties was an illegitimate child. Education, travel, contact in cities with people of other castes and such causes have widened the outlook of the younger generations whose ideas of marriage, home and life generally are broader, and they resent the evil I have above mentioned; but they are helpless." The Bill was strongly opposed by the orthodox members of the Council but leave to introduce it was given after the Home Member had expressed the attitude of Government which was that Government would be glad to get the Bill circulated in order to obtain public opinion upon it.

Mr. Surendranath Banerjea moved the following resolution on the Reform proposals: "This Council while thanking His Excellency the Viceroy and the Secretary of State for India for the **Reform proposals**, and recognising them as a genuine effort and a definite advance towards the progressive realisation of responsible government in India, recommends to the Governor-General in Council that a Committee consisting of all the non-official members of this Council be appointed to consider the Reforms Report and make recommendations to the Government of India." There was an animated discussion in which most of the non-official members participated. Mr. Banerjea said, he regarded the reform proposals as a distinct advance upon the existing state of things, nay more, as a definite stage towards the progressive realisation of responsible government. Whilst approving of the provisions of the scheme in relation to the provincial governments he criticised the system proposed for the government of India. The views expressed by Mr. Surendranath Banerjea were very generally endorsed and a note of dissent came from only a very few members. Mr. M. N. Hogg and Mr. Ironsides declined to serve on the Committee because they did not believe it would serve any useful purpose. Pandit Madan Mohan Malaviya said he could not share with the mover of the resolution in the optimism which he assumed in describing the effect of these proposals. Mr. V. J. Patel was unable to support the resolution in the form in which it appeared on the agenda. The resolution was divided into two parts. The first part was carried by 46 votes to 2 and the second part by 46 votes to 2.

The Finance Member then proposed the following resolution: "That this Council recognises that the prolongation of the war justified India's taking **a larger share** than she does at present in respect of the cost of the military forces raised, or to be raised in this country. He said the Government had no desire to use their majority in order to force this resolution through the council. They wanted to leave the decision thereon to the non-official members on behalf of the much larger public in India to whom they desired to appeal; and if the bulk of the non-official colleagues felt unable to support the resolution it would be withdrawn. He described the change in the military situation caused by the collapse of Russia and the steady advance of the enemy forces in the direction of the frontiers of India. He then summarised the various proposals he placed them before the Council in the following form: "In 1918-19 we shall have to defray £500,000 additional for pension charges; £9,000,000 in connection with our liabilities for a larger normal-cost Army, as it may be called, including the increased emoluments sanctioned for Indian troops; £3,000,000

in respect of Indian troops lines and £200,000, in respect of the European Section of the Indian Defence Force; working to a total of £12·7 million. After this year the charge in respect of Indian troops lines will disappear, save as a practically negligible item, but in 1919-20 assuming this to be a full year of war, the continuance of the remaining charges on a somewhat larger scale, and the addition to these in respect of the further 100,000 men whose additional cost we should be taking over, may be put at £14·7 million. Consequently, our total figures are—for the current year £12·7 million, for 1919-20 £14·7 million and for 1920-21, allowing for the results of gradual demobilisation, £7·7 million, making a total of about £35·1 million. Adding to this £10 million, further liabilities in respect of additional pension charges we work up, roughly, to a grand total of £45 million.

"As regards the financing of these contributions, I think, having regard to the quotations I have made previously from your Excellency's speeches, to various references I have seen in the newspapers, and to the Bill I introduced a few days ago allowing a provisional and temporary levy of enhanced customs and excise duties prior to the law enforcing them coming into actual effect—though this measure was really intended to help procedure on some future occasion on which we might have to raise the duties in question—that there has been expectation that we should propose additional taxation this session. That indeed was the idea which we had ourselves formed. But on further consideration and discussion of the matter with the Secretary of State, we have come to the conclusion that additional taxation will not be required this year. The reasons for this are twofold: First. We have come to the conclusion that we can meet the £12⅔ million which I have indicated as the approximate charge this year of the programme of contributions outlined, from our existing resources, having regard to the fact that, notwithstanding the poor agricultural situation in some parts of India and the probability that our military charges will be somewhat in excess of the Budget provision, our actual surplus is likely to be much larger than the £2½ million which we took in the Budget. This is due in the main to large receipts from the gain by Exchange we are making on the present exchange rates (and it will be remembered that the normal exchange basis has been raised to 1s.6d. since April) which were excluded from our Budget calculations, for the reasons stated in my speech introducing the current year's Financial Statement. Briefly, the reason given was that we did not wish to gamble on the uncertainties of exchange. Second. We desire that any additional taxation we may have to impose should be adjusted so as to fall largely on the well-to-do and especially upon those who have made large profits from circumstances arising out of the war."

Rao Bahadur B. N. Sarma proposed the following amendment:" Provided that no further taxation is imposed, except in respect of excess profits derived during the war." The non-official members generally speaking expressed their perfect readiness to agree to India bearing this portion of her military charges. The dissentients were so few as only to emphasise the general unanimity. The Finance Member was unable to accept Mr. Sarma's amendment because it unduly cramped the discretion of Government. The amendment was defeated but a subsequent amendment by Mr. Sastri was carried and the resolution was adopted in the following form: "That this Council recognises that the prolongation of the war justifies India's taking a larger share than she does at present in respect of the cost of the military forces raised or to be raised in this country, and recommends that such larger share be to the extent and under the conditions and safeguards indicated in the speech of the Hon. the Finance Member in moving this Resolution." The amendment was carried by 18 votes to 5. Sir William Meyer moved that the Indian Paper Currency Bill to provide that silver held in America or in transit therefrom be reckoned as part of the Paper Currency Reserve be taken into consideration. The Bill was passed together with the Gold Coinage Bill, the Enemy Trading Validation Bill, the Indian Army Suspension of Sentences Amendment Bill and the Indian Companies Foreign Interests Bill. The Land Acquisition Amendment Bill was introduced by Mr. V. J. Patel with a decision that it should be published. Pandit Madan Mohan Malaviya moved a resolution with regard to the early release of **indentured labourers** in the following terms: "This Council recommends to the Governor-General in Council that the Government of India should move the Secretary of State for India to negotiate with the Colonial Office and the Crown Colonies concerning the early release of those Indian labourers whose indentures have not yet expired". Sir George Barnes informed the Council that His Excellency the Viceroy had already opened negotiations with the Government of Fiji on the subject with the result that a very substantial improvement had been effected. The resolution was adopted in the following amended terms: "This Council recommends to the Governor-General in Council that the Government of India should move the Secretary of State for India to negotiate with the Colonial Office and the Crown Colonies concerning the early release of Indian labourers in Fiji whose indentures have not yet expired."

Mr. G. S. Khaparde proposed that the Indian **Arms Act** be so modified as to bring it into line with English legislation on this subject. The Home Member said the resolution would result in every village *budmash*, every thief and dacoit being in a position on payment of Rs. 5 or Rs. 7 at a post office to get a gun and use it to terrorise his village neighbours. That was a position of affairs which they could not contemplate. Government had formulated certain definite proposals for the amendment of the Act and desired to get the information of official and non-official members in regard to it. The resolution was put to the Council and adopted in the following amended form: "That this Council recommends to the Governor-General in Council that a Committee of official and non-official members of this Council be appointed to consider and report to the Governor-General in Council to what extent the

Indian Arms Act and the rules thereunder can be amended."

The Indian Non-ferrous Metal Bill, the Indian Army (Suspension of Sentences) Amendment Bill and the Indian Defence Force Further Amendment Bill were passed. The Commander-in-Chief introduced a bill to provide that "certain persons deemed to be enrolled under the Indian Defence Force Act, 1917, shall be liable to serve as well without the limits of India as within those limits and that when so serving they shall be subject to the said Act." He pointed out that European British subjects were liable for local military service only and these limitations were inconvenient.

Sir William Meyer introduced the Bronze Coin (Legal Tender) Bill to provide that certain bronze coins coined outside British should be legal tender in British India if they conformed to the requirements existing in respect of coins struck at the Indian mints.

Mr. G. S. Khaparde proposed the following resolution on the subject of the **Boy Scout** Movement in India: "This Council recommends to the Governor-General in Council that Local Governments be directed to initiate a boy-scout movement and prepare a scheme for preliminary training such as drill, marching, scouting, etc., for all boys in Government schools in India in an ascending scale of efficiency, according to their classes, or aptitude and other qualifications." The Education Member having given the assurance that the question would be taken up after the war it was withdrawn. Mr. V. J. Patel introduced a resolution proposing the amendment of the various acts in respect of which there had been conflicting rulings of different high courts. The impossibility of this procedure having been pointed out by the legal members of Council it was withdrawn. Mr. G. S. Khaparde moved the appointment of a committee to inquire into the effect produced on the press in India by the legislation relating to it and by the Defence of India Act of 1915 and the moral and material condition of the press in India: in the course of the debate the Home Member said, the resolution was an attack on the working of the Press Act. The Government supervised the working of this Act with the utmost care and were perfectly satisfied that such an inquiry was unnecessary as there was no foundation for the statement that the Act was maladministered. The resolution was defeated by 37 votes to 15.

Mr. G. S. Khaparde proposed the following resolution on the subject of the **Sedition Committee's** Report and the working of the Criminal Investigation Department: "That this Council recommends to the Governor-General in Council that the consideration and disposal of the report of the Sedition Committee of 1918 be kept in abeyance and that a thorough and searching inquiry be undertaken by a mixed Committee of an equal number of officials and non-official Indians into the working of the Criminal Investigation Department, including the Central Intelligence Department". The Home Member on behalf of Government declined to admit the necessity for any inquiry in view of the detailed investigations which had already been made. He said, "I wish to say that any inquiry of this kind must necessarily give rise to the idea that Government suspects the work of these officers to be unsatisfactory. Well, I have tried to show that we have no reason to suspect them. On the contrary, we owe them a great debt of gratitude for work done in peril of their lives, in the face of social ostracism, in the face of malignant false charges, and virulent abuse. And this is the reward that we are asked to give them, namely, to cause an inquiry to be made into their conduct, because we are doubtful whether their conduct has been satisfactory, although the Hon. Member has not put forward one single instance, or given one single reason for such an inquiry. I submit that nothing could be more inopportune, more capable of misrepresentation, or more injurious to the administration than the inquiry which the Hon. Member proposes and I earnestly hope that the members of this Council whatever doubt they may feel as to various recommendations in the report will not support this motion. They will have an opportunity to object to any specific proposal later, but for their own credit, for the credit of this Council, I earnestly hope that this resolution will meet with no support from any reasonable member." A notable contribution to the debate was that of the Lieutenant-Governor of the Punjab, who, in speaking of the value of the work of the Criminal Investigation Department, gave the following instance: "A general rising in the Punjab and in other parts of Northern India had been planned for the 21st February 1915. Our Criminal Investigation Department got inside the plot, whereupon the revolutionary leaders, among whom were Rash Behari Bose and the Mahratta Pingle, hastily decided to antedate the rising to the 19th February. Emissaries were at once sent from the Headquarters at Lahore all over the Punjab to precipitate matters. The programme in the Punjab was that night the Ghadr party should concentrate on the various cantonments where they expected to find adherents among the troops, with their aid to raid the arsenals and magazines, secure arms and raise the standard of mutiny. All that was to happen on the night of the 19th February. At 4-30 on that afternoon our Criminal Investigation Department raided the Ghadr Headquarters at Lahore, seized several of the leaders and found all the panoply of revolution in full array. There were fire-arms, bombs, bombing materials, incendiary literature, maps and lists of troops, and last but not least the new revolutionary flag. It took an hour or two to sift the information, but at 6-30 on that afternoon we were in a position to wire to the various out-stations where an attack had been planned for that night and warn the authorities. Again, we were only just in time. We found subsequently that at various centres—I need here only mention Lahore and Ferozepore Cantonments as they are named in the Rowlatt Report—revolutionary bands had already begun to assemble, but finding that the troops on whose assistance they had relied were on the alert and were under arms to resist them, they saw that the game was up and rapidly dispersed. Several of these men subsequently fell into our hands and the facts I have cited in this Council are based entirely on the judicial findings in their cases." The resolution was defeated by 46 votes to 2.

Rao Bahadur B. D. Sukul proposed the following resolution on the subject of the **economic condition** of the ryots: "This Council recommends to the Governor-General in Council that the Government of India be pleased to call upon the Provincial Governments to appoint committees consisting of officials and non-officials to inquire into the economic condition of the agriculturists in a few typical Government Zemindari and Inam villages or areas in the different provinces and submit their report." Sir Claude Hill said it was impossible to undertake this inquiry at a time when their services were depleted and seriously over-worked. The resolution was withdrawn.

Mr. G. S. Khaparde, proposed the appointment of an **Agent-General** for India in London in the following terms: 'This Council recommends to the Governor-General in Council that the Secretary of State for India be moved to take into his favourable consideration the appointment in London of an Agent-General of the Governor-General to discharge for India the duties that are performed by Agents-General for Colonies and to adjust the existing machinery of the India Office accordingly." The resolution met with no support and was rejected.

Mr. V. J. Patel proposed: "That this Council recommends to the Governor-General in Council to rule that all legislation necessary to give effect to the reforms indicated in the Local Self-Government Resolution, dated the 16th May 1918, shall be undertaken by the Provincial Legislative Councils to be constituted under the Chelmsford-Montagu Reforms and not by the existing Provincial Councils." The resolution was withdrawn.

Rao Bahadur B. N. Sarma proposed that immediate steps be taken which would enable Government to assist to develop the building of an Indian **mercantile marine.** The Commerce Member detailed the steps which had been taken to encourage the building of wooden ships. He pointed out that steel ship building could not economically be carried on in India at the present time. On his suggestion the amendment was altered and carried in the following form: "That this Council recommends to the Governor-General in Council that as soon as circumstances permit the Government should consider in what way the industry of shipbuilding can best be encouraged in India."

Khan Bahadur Mian Muhammad Shafi moved a resolution that the thanks and congratulations of the Council be conveyed to the allied armies now so successfully operating on the various fronts. After a spirited discussion it was unanimously adopted. Mr. V. J. Patel moved the following resolution: "That this Council recommends to the Governor-General in Council that immediate steps be taken to submit a representation to His Majesty's Government urging that the Indian National Congress and the All-India Muslim League Deputations be permitted to proceed to England without delay." The Home Member said that in the coming year all possible facilities would be given to the properly accredited representatives of all shades of opinion in limited numbers to visit the United Kingdom and place their views on the subject of the Reforms before the public in that country. The resolution was negatived.

The Commander-in-Chief introduced the **Industrial Compulsion** Bill giving the Government power to conscript persons liable to military service under the Indian Defence Force Act for war work as well as for military service. The **Cotton Cloth** Bill as amended by the Selection Committee was passed.

The Viceroy in closing the session briefly reviewed the work that had been accomplished and referred to the world position in the following terms: "Our session is over. We met three weeks ago buoyed with high hopes in the coming triumph of our cause. In three short weeks our hopes have gone from strength to strength. The first faint flicker of victorious peace, which then seemed dawning on the horizon, is now beginning to kindle the whole sky. From every front comes news of victory. And in the latest victory of all, India can proudly claim a glorious share. For great forces have gone forth from India to Palestine manned from British India and the Native States, and by Gurkhas from Nepal, whose Prime Minister has ungrudgingly placed at our service the gallant man-power of his country. The full story of that victory has yet to be told; its far-reaching effect no one amongst us can foresee. But of this I am assured. When the record of that glorious campaign is unfolded, across the page of history will be writ large the name of India."

The Council then adjourned *sine die.*

Bombay Legislative Council.

The Council met in March when the Hon. Mr. Carmichael presented the revised **budget estimates.** His statement showed that on the closing of the accounts for 1917-18, the opening balance was found to have improved on the revised estimate by 29 lakhs and stood at 271,28. The revenue budgetted for in the current year was 8,05,34. On the basis of actual receipts up to date it was anticipated that it would actually amount to 8,73,30. The increases of importance fell under the head- of Excise, Income Tax and Forests. A rapid increase had been shown in provincial revenues. This increase, which began in 1916 and still continues, has not been attended by fresh taxation, except under Excise. Mr. Carmichael observed that this satisfactory position was largely a result of the effects of the war on trade and industry

in Bombay and on the prices of agricultural and forest produce. Turning to the estimated expenditure for the ensuing year, he explained that though increased revenues allowed scope for additional expansion it was proposed to leave a margin between expenditure and revenue of 40 lakhs in order that provincial revenues might afford as much help as possible to Imperial finances at a difficult and critical time. Nevertheless, the outlay proposed in the Financial Statement represented a large advance over the budget of last year. Special attention had been given to educational advancement, on which there was to be an increased expenditure of 20¼ lakhs, and substantial provision had been made for sanitation and grants-in-aid to local bodies for water supply and medical services, and funds had been allotted for the development of industries and Government forests.

After considerable debate the Government's **Rent Bill** was passed. This measure applies to business premises as well as to dwelling houses and in application is not limited to premises of any specified rental. Dating from 1st January, 1916, standard rent is fixed by permitting an addition of 10 per cent. the measure being operative for the period of the war and six months and if necessary for a further period of 18 months at the discretion of the Governor-in-Council.

Mr. Patel moved a resolution urging that selected local boards and municipalities in the Presidency should be given the power of determining the number and location of liquor shops within their limits. Mr. Patel suggested that this might be started as a small experiment in selected localities where Government considered that this function might be usefully transferred to local bodies. H. E. the Governor stated that Government was opposed to the principle of transferring this power of **licensing control** to municipalities, but the resolution was carried by 17 votes to 16.

Among other resolutions was one moved by Mr. Paranjpye that Government should allow a municipality to introduce a system of **proportional representation** by means of a single transferable vote in some or all of the wards or groups of electors. The resolution was withdrawn, the majority appearing to consider the proposed system too complicated and Sir Ibrahim Rahimtoola suggested that discussion of it was premature until the report was issued by the Committee considering the question of the enlargement of the electorate of municipalities and local boards.

Several resolutions were moved on **educational questions**, the most important being Mr. Paranjpye's proposal that Government should add an alternative middle school branch to fill primary schools by appointing one English teacher to every school where there are likely to be twenty boys in the first three Anglo-Vernacular standards. Mr. Paranjpye submitted that there was a great demand for English education all over the Presidency, that complaints were heard on all hands that high schools were overcrowded, and that it was suggested that they must open new schools to meet the increased demand. But the opening of new schools meant a heavy outlay, and though they must have more schools later on, Mr. Paranjpye argued that meantime they might appreciably relieve the situation at very little cost by adding to the staff of primary schools an English teacher for the first three English and the last three Vernacular standards. Mr. Covernton, the Director of Public Instruction, described the proposal as a "revolution of the vernacular system," a proposal that would result in their setting inferior teachers to give instruction in English. It was agreed that an informal conference should discuss a scheme to be drawn up by Mr. Paranjpye, Government being willing to finance the experiment if that could be done without interfering with the advancement of primary education.

At the August session more than one speaker referred to the practice of accumulating provincial balances. Mr. Lalubhai Samaldas said that no doubt these balances were intended to assist the Government of India in connection with the war should the need arise, but he hoped that when the reform proposals took shape the Bombay Government would be strong enough to resist any tendency on the part of the Government of India to estimate the share of the provincial contribution on the basis of the reduced expenditure during the last few years.

Acts were passed to amend the Bombay Medical Act, to disqualify certain aliens from being members of, or voting at elections for, certain local authorities, to amend the Bombay District Police Act, to amend the Bombay Municipal Act, and, as a war measure, to amend the Karachi Port Trust Act.

A Bill was introduced to **restrict the rent of small premises** in the Bombay Presidency. After an animated debate this measure, designed in the interests of the poor, passed the first reading, and was referred to a Select Committee. That body's report necessitated the re-drafting of the Bill and a modification of the proposed penal clauses.

Among the subjects discussed was that of the **exodus to the hills**, the lengthy debate on this time worn theme eliciting the fact that non-official opinion is increasingly opposed to the constant migrations of Government, but failing to produce any new official arguments in favour of those moves.

At the September session a statement was made as to the effects of the failure of the monsoon and as to the proposed measures of relief.

The Hon. Mr. Belvi moved a resolution that the non-official members of this Council should form themselves into a committee to discuss the question of **reserved and transferred subjects**, as contemplated in the concluding part of paragraph 238 of the Reform Proposals and should submit at an early date their report to the Governor-in-Council for consideration. The resolution was carried without discussion. Chief interest at the November meeting of the Council centred in the **Bombay Cotton Contracts Control (War Provisions) Act**, which proposed to constitute a Board, the members of which would be nominated by the Government, and to give the Board powers to establish a clearing house and make the rules and regulations which are required. It was proposed that the Board should have power to regulate not only forward but also ready contracts. The

first reading was passed and the Bill referred to a Select Committee. At the December session the Hon. Mr. Carmichael, who was in charge of the Bill, said that the most important point in the Bill was the proposed constitution of the Cotton Contracts Board. The Select Committee had increased the number of members of the Board from 8 to 12, but the more important question was the method of appointing the members. After considering a variety of criticisms directed against the principle of nomination of members of the Board, the Select Committee had decided to constitute a Board consisting of an official Chairman, and six nominated and five elected members (three to be elected by the Clearing House and two by the Millowners' Association of Bombay). The main difficulty was to secure the representation of all sections having direct interest in the actual handling of cotton. Apart from the Millowners' Association, the membership of the Clearing House afforded the only possible basis of franchise. However, at present, the Clearing House was in an immature and unorganised state and gave no guarantee that the grant of the franchise to this body would secure a measure of representation in proportion to the weight of all the interests involved. The nominated element would be represented by persons who have an intimate knowledge of the trade. They were at present with an intermediate stage of evolution of the cotton trade, and with the growth of unity, unity of control would become possible. After some debate the Bill passed the second reading.

This was the last session to be attended by Lord Willingdon as Governor, and several members paid a tribute to his services to the Presidency to which His Excellency replied in a speech reviewing his tenure of office.

Madras Legislative Council.

During the year the proceedings of the Madras Council were full of interest. There were five ordinary meetings, as in previous years, and one special session. Of the ordinary meetings that which was held in March was exclusively set apart for the consideration of the Revised Financial Statement. The third meeting—that which was held in April—was the occasion of the Budget Debate when opportunity was taken by the Government to announce their policy in regard to the measures they had adopted during the previous year and those they proposed to adopt in the coming year, and by the non-official members to criticise the actions of the Government in so far as they were not acceptable to them and to suggest the carrying out of proposals in which they and their constituents were interested. The legislative business of the year was mostly accomplished in the other three meetings—those held in February, August and November. The special session held in October was confined to the discussion by the non-official members of the Reforms Report and for the expression of their opinions as to which of the subjects should be reserved and which transferred in the scheme of Reforms, the Government of India having called for their opinions. In connection with the consideration of the Financial Statement there was a deviation from the usual practice. The custom till 1918 was for the members to deal with resolutions and questions bearing on ordinary matters of administration in connection with the Financial Statement. But during the year the rules for the discussion of the Financial Statement were so modified as to restrict the discussions to the Financial Statement alone. This secured not only speedy disposal of business but enabled the Government to accept or reject without much debate the suggestions of the non-official members. The retrenchment of expenditure on civil works and the utilisation of that amount to objects which were more immediately beneficial to the people, like education, sanitation, etc., were suggested by most of the Indian members. The Government readily complied with the requests as far as they were practicable but were unable to meet with many of the proposals in as much as large works already started could not properly be put off indefinitely. As a result of the war many of the works which would otherwise have reached completion could not be finished for want of materials from Europe and further postponement of their completion was thought to be unwise.

The legislative business proper during the year opened with the Hon'ble Ahmed Thambi Markkayar's **Moplah Succession Bill** being referred to a Select Committee in the February session. The Select Committee's report was presented at the April meeting when the Bill received the assent of the Local Government. It was passed into law on May 25th, having received the assent of the Governor-General in Council. Other measures of importance were the Prevention of Adulteration Act, the Doddabanayakanur and Vuyyuru Impartible Estates Act. The **Madras City Municipal Bill** which was before the public for criticism for over two years was formally introduced in the Council during the year. A heated debate ensued on the question as to whether the time was opportune for its introduction in view of the Reforms that were then talked about. But the Government were able to see that the motion

to refer it to a Select Committee was carried through. There were also certain minor Bills introduced in the Council during the year.

The Bill for the Prevention of the Spread of Insect pests, Plant diseases, and Noxious weeds aimed at preventing of any insect or fungus harmful to crop the transport from one part of the country to another. Legislation was considered necessary for the eradication of bud-rot disease in connection with palmyra in the Godavari and Kistna districts and against damage done by coffee-borers and the special kind of pest which attacked the pepper vine in the Western districts. The Devaswam Bill was intended to secure the efficient and honest management of the properties in British India belonging to the Devaswam which was situated in Cochin. In connection with the Port Trust Bill a motion was brought recommending that the Indian element of the elected representatives on the Port Trust be raised from 2 to 3. The Government did not, however, accept the motion as the Port Trust Board had already the maximum number provided under the Act and as the volume of interests concerned could not fairly be covered if the proposal should be agreed to.

Interpellations and resolutions continued to be the chief means whereby non-official members of the Council ventilated the suggestions of their constituents and influenced the policy of the Government to the general benefit of the people. There were as many as 600 questions during the year and they covered a wide range of subjects. Some of the members asked for statements showing the representation of the various communities in the services and public offices and the Government readily complied with the request. Much useful information was also elicited as to the activities of non-official bodies in the field of education. The attitude of missionary bodies towards the growth of philanthropic Indian enterprises in the cause of education was the subject of a few interrogatories. Enquiries as to the action taken by the Government in connection with some local riots and disturbances occupied a fair share of the interpellations. The aim of most of the resolutions brought forward by non-official members was for securing greater co-operation between the Government and the representatives of the people and for the latter being taken into greater confidence by the Government in matters which affected the public as a whole. The **Madras High Court** engaged a large attention of the non-official members during the several meetings. There were resolutions recommending that the full correspondence with the Government of India and the Secretary of State over the fixing of the permanent strength of the Madras High Court at ten and the further continuance of the temporary Judges be laid on the table, and that a committee of officials and non-officials be appointed to examine the real state of arrears in the Madras High Court before the term of the temporary Judges was extended again. The Government could not accept the former resolution as they regarded the case as not closed in view of the correspondence still going on between the Imperial and Local Governments on the subject; the latter was opposed as all the statistics that were available were furnished by the Hon'ble the Judges of the High Court and as the Government did not feel that the services of a special committee such as had been proposed were required. Of more than ordinary interest was the resolution brought forward for the cancellation of two orders of the Government prohibiting the attendance of under-graduates at public meetings. In the first of the two orders an absolute prohibition was placed and in the second, which was issued on the informal representations of a few of the respected members of the Council, the policy was adhered to but the heads of colleges were authorised to carry out the instructions of the Government in this regard. The non-official members represented that the original order trenched materially on the liberty of students and that it would result in espionage on the part of teachers over students and that the modification while it made no change in the position merely transferred the agency from Government to heads of colleges to take disciplinary action in cases of breach of the orders. The Government were not, however, prepared to interfere with the orders. Another resolution, in which all the members of the Council took part, was the one brought forward by Mr. Ramachandra Rao recommending that the functions of the **local boards** be enlarged and that statutory provision be made in the Local Boards Act which was then under revision empowering local boards to express their views on all subjects relating to the various branches of district administration. On behalf of the non-official members it was pointed out that the suggestion was one which had the support of the late Mr. Gokhale, that it was one of the recommendations of the Decentralisation Commission that closer identity and association of people should be secured in the various branches of district administration and that the time was very opportune for such a measure in view of the impending constitutional reforms. The Government were, however, not prepared to accept the resolution in the form in which it was moved. It was argued that local boards were constituted purely for local purposes and to saddle them with the duties then proposed would seriously hamper smooth working of the board. It was also stated that in certain branches of the district administration one man only could act satisfactorily and a great deal of the Collector's work, being one man's work. discussion by a number of other people would harass him and would affect district administration. In winding up the discussions on this resolution His Excellency observed that the trend of the times was to liberalise local administration and that he was in full sympathy with the resolution. He was, however, not in favour of the principle as there was no local institution in Great Britain which enjoyed the power proposed to be given to the local boards in this country by the resolution then under consideration. The motion was thereupon withdrawn. A resolution to invest local bodies with full discretion and control in organising and notifying plague measures was opposed by the Government on the ground that unpopular measures such as seggregation, etc., which were essential to arrest the spread of the disease could more effectively be carried out

by the Government than by local boards. It was also stated that when action against plague had to be co-ordinated over a wide area public bodies all over the country could not be trusted to carry out plague measures with the promptness, efficiency, and a certain degree of uniformity which the Government can lay claim to. A public enquiry as to the economic condition of the agricultural labourers in some typical villages which was suggested in another resolution met with a strong opposition from the Government. But the non-official members were able to convince the Government of the need for such an enquiry and the Government agreed to institute an inquiry into the condition of the agricultural labourers without its being public. Mr. A. S. Krishna Rao's resolution recommending that steps be taken to extend the system of trial by jury in courts of sessions was opposed by the Hon'ble Mr. Gillman on behalf of the Government on the ground that the conditions of the Presidency were not ripe for the extension of the system.

The August session of the Council opened a somewhat unusual motion brought forward by the Hon'ble Mr. B. V. Narsimha Ayyar that the Council be adjourned for the next six months inasmuch as the Government were not taking adequate steps to secure the protection of the people when as a result of high prices of necessaries of life the epidemic of looting was spreading into many parts of the interior of the Presidency. The motion was, however, ruled out of order by His Excellency the President. The resolution recommending substantial annual grants-in-aid to the Madras Ayurvedic College and other similar institutions for the encouragement of the study and practice of indigenous systems of medicine and for instituting a research into the value of indigenous medical science and for starting schools for teaching Ayurvedic and Unani systems of medicine was the subject of a somewhat acrimonious controversy as to the relative superiority of Eastern and Western systems of medicine. The Indian representatives claimed for the Ayurvedic and Unani systems all that was best in medicine and the representatiwfes of the Government condemned them as archaic, scientific and out of date. The motion, however, led to certain interesting disclosures. Mr. Siva Rao proposed that steps should be taken for checking the abnormal prices of foodstuffs and other necessaries of life and, though the motion had the support of all the Indian members of the Council, it could not be agreed to by the Government for the reason that the control of prices, in their opinion, should be instituted at the source of supply and that prices were never controlled even at the worst of famines.

Bengal Legislative Council.

When the Bengal Legislative Council met on January 22, Kumar S.S. Ray moved that the **Bengal Tenancy (Amendment) Bill** be recommitted to the Select Committee to be altered in such a way as to safeguard the interests of the landholder as well as of the tenant. The proposal was opposed by Mr. Cumming, who pointed out that the object of the Bill was to prevent the acquisition of the lands of aboriginal peoples by money-lenders and that the Bill was not directed against landholders. The Maharaja of Burdwan and others deprecated the motion on the ground that zemindars were on their trial and ought to avoid giving the impression that they were more concerned for their own interests than for the protection of their tenants. The motion was defeated by 36 votes against 3.

A Bill to disqualify aliens, excepting Armenians, from voting at elections of local bodies in Bengal, or becoming members of such bodies was introduced.

A Bill was also brought in to supplement the Charter of Serampore College, so as to allow of its management being placed on an inter-denominational basis.

A resolution was moved by Babu Surendranath Roy calling upon the Bengal Government to encourage the manufacture of salt in Bengal and to free from duty salt manufactured by people for their own consumption. The motion was opposed by Mr. Donald, who said that the suspension of the duty would soon lead to illicit practices, and who set forth the inquiries made by Government into the feasibility of salt manufacture in Chittagong. The Government would consider any workable scheme, but none had been proposed. The motion was defeated.

On February 19, Mr. Irwin moved that the teaching of **hygiene and sanitation** should be compulsory in all State-aided schools, that these subjects should be made compulsory for the University Matriculation Examination, and that provision for qualified teachers should be made in the next budget. The motion was welcomed by Indian members who expressed their gratification that a European colleague had moved a resolution designed for the welfare of the Indian people. Sir S. P. Sinha argued that the motion could not be carried into effect, because the teaching staff required was not available. A Committee had inquired into the whole subject, and as a result a scheme was

being prepared to make hygiene a part of the course in training schools. The Government of India had considered and abandoned the idea of urging that hygiene should be a compulsory subject for the Matriculation examination. As for the third clause of the resolution, no funds were available. The motion, however, amended to make hygiene optional for the Matriculation, was carried by 24 votes against 18.

Babu Akhil Datta moved that the words "A good deal of eloquence has lately been expended on the subject of increased expenditure on the "Police" be deleted from the Police Administration Report. He contended that it was not decorous for the head of a department to criticise discussions in Council. Sir Henry Wheeler explained that the Inspector-General of Police had not in mind exclusively or mainly discussions in Council, and the motion was rejected by 18 votes against 17.

On March 14, Mr. P. C. Mitter moved that a staff be deputed for one year to organise village unions in villages with a population of over 2,000. He complained that at present progress was so slow that it would take 104 years to bring all villages under Municipal administration. Sir S. P. Sinha opposed the motion on the ground that a spurt had been made in recent years and that Government had asked sanction for a staff of 238 circle officers. It was, moreover, obvious that the question could not be properly considered until the Village Self-Government Bill was introduced and discussed. The motion was withdrawn.

Mr. Mitter also moved that a sum of Rs. 50,000 should be provided to supply a staff to organise Co-operative Credit Societies for cottage industries and agricultural produce. Mr. Beatson Bell replied that progress was being made in this direction, but the motion was carried by 28 votes against 17.

Sir R. N. Mookerjee moved that a sum of Rs. 50,000 be provided to build a hostel for mechanical apprentices at Kanchrapara adjoining the Eastern Bengal Railway Workshop. His object was to facilitate the admission of Bengali boys for training at Kanchrapara. He believed that the training of these boys as mechanics would not only create new openings for them but help to meet the great demand for mechanical engineers. Sir S. P. Sinha urged that time should be given the Government to consider this proposal which was a part of a larger scheme for the training of Bengali boys in railway workshops. Sir R. N. Mookerjee, however, pressed for the acceptance of his resolution, which was agreed to.

On March 15, a number of resolutions relating to education were moved. Proposals were made that provision should be made for the creation of a Professors' and Teachers' insurance and provident fund, that two lakhs be allotted for making building grants to unaided high schools, that provision be made for the preparation of text-books in English and the Vernaculars. All the motions were withdrawn on an official explanation being given.

Babu Surendranath Roy moved that 21 lakhs should be deducted from the proposed expenditure on the police. He said that owing to the heavy increase of the cost of the police, many useful schemes were being held up, while large expenditure on the police was not synonymous with greater efficiency. Sir Henry Wheeler pointed out that the expenditure in all Departments was increasing, that the police projects which had been criticised were long overdue, and that the increase in the pay of the Calcutta police was necessary, because of the difficulty of obtaining recruits on the old pay. The resolution was lost.

On March 16, Babu Surendranath Roy moved that a grant of Rs. 9,000 should be made to the Astanga Ayurveda College of Calcutta. Sir Niratan Sarkar opposed on the ground that an attempt to build a scientific Ayurvedic school apart from a medical school was bound to fail. Sir H. Wheeler opposed on behalf of the Government and the motion was lost.

The Serampore College Bill was passed, after the rejection of an amendment designed to secure that the titles and degrees granted by the College should be different from those of other Indian Universities.

On March 28, Babu K. M. Chaudhuri moved that facilities be afforded to detenus who may desire to appear at the next Univeristy Examinations. He argued that the educaton of boys should not be interfered with merely because they were detained on suspicion. Sir Henry Wheeler explained that when the educational authorities were willing to allow a detenu to present himself for examination, the case was considered on its merits. The motion was rejected by 22 votes against 18.

On April 4, Sir S. P. Sinha introduced the Village Self-Government Bill, whose object is to establish elective village committees which will administer village affairs and exercise restricted judicial powers.

On July 3, the Maharaja of Burdwan moved that the Calcutta Hackney Carriage Bill be referred to a Select Committee. One of its proposals is that the control of hackney carriages should be transferred from the Corporation to the Commissioner of Police.

Babu K. M. Chaudhuri asked permission to withdraw a motion for a Committee of officials and non-officials to inquire what legislative action was required to discourage professional beggars. Mr. Crum, however, objected to the motion being with drawn and urged that an inquiry should be held. Sir Henry Wheeler thought it premature to appoint a Committee, but said that the Government were willing to consult various bodies in Calcutta with a view to ascertaining whether there was room for a more elaborate investigation.

On August 19, Maulvi Fazl-ul-Haq moved that a selected officer be placed on special duty to report on the steps necessary to increase **cotton-growing in Bengal**. He urged that, in view of the dearness of cotton cloth, it was desirable to see whether cotton could not be grown at Dacca, once famous for its muslins. Mr. Cumming opposed on the ground that the only officer available was the Economic Botanist, who was already considering the

question but who had other calls on his time. Mr. Crum, while deprecating the excessive claims put forward by the mover, thought that Government might do more than they were doing to ascertain whether tree cotton could be revived in Dacca. The motion was carried by 14 votes against 12.

On September 3, the Juvenile Smoking Bill was, on the motion of Dr. Suhrawardy, referred to a Select Committee.

A long discussion took place on the alleged effect of the septic tanks of the jute mills upon the purity of the Hooghly. The Maharaja of Burdwan, on behalf of the Government, pointed ont that the condition of the river was not due to the septic tanks but to many other causes of pollution such as brick fields, boatmen, and the discharge of creeks and khals. Nevertheless a motion for a more stringent inspection was rejected only by 18 votes against 16.

The United Provinces Legislative Council.

At the meeting of the United Provinces Legislative Council at Lucknow on April 3rd, His Honour Sir Harcourt Butler presiding, the **Oudh Amanati Notes** Bill was passed. Mr. Sim presented the Budget. Mr. Chintamani moved seventeen amendments to the rules for the conduct of business of which fifteen were accepted. Mr. Sami-ul-lah Beg moved: That this Council is of opinion that rules 12 and 13 of Chapter XV of the rules of the High Court of Judicature at Allahabad work very harshly on some of the LL.B. candidates of the Allahabad University, the effect of the rules being that a candidate who takes a B.A. degree of the Punjab University, but passes his LL.B. in the Allahabad University, is not entitled to be enrolled in the High Court of Allahabad, though a B.L. of the Calcutta or Madras University under similar circumstances can be admitted on the rolls of the Allahabad High Court, and this Council further requests His Honour to invite the special attention of the High Court to the above rules for the purpose of re-considering the same if possible. The resolution was adopted.

The Council met again on 9th April. The Budget discussion as usual covered a wide range and various suggestions were made which the Financial Secretary promised to consider. All the non-official members were unanimous in their acknowledgment of the ability and industry of the Financial Secretary. Mr. Sim replied in suitable terms. Among the resolutions moved by Mr. Chintamani was one regarding the appointment of a **Governor in Council** for these provinces which elicited an interesting debate. The official members did not vote, but the resolution was almost unanimously carried by the non-official members.

Sir Harcourt Butler, in closing the proceedings made a highly interesting speech on the problems of administration and took the Council into his confidence on more than one question of his policy. He announced that the most important part of all his duties would be the maintenance of law and order, in which he was glad to feel that he would have the support of his Council. He referred to the Police, to education and especially to indigenous education. He said that co-operation was above all necessary between officials and non-officials. Regarding the Prime Minister's message to the Viceroy, referring to the attitude of the United Provinces, he said: "I say without hesitation that the needs of the Empire are the opportunity of the United Provinces. I have no doubt that in this time of trial the people of the United Provinces will sink their differences and will co-operate so as to bring their province into the position which it rightly holds by population, by history and by tradition and that is the position of the first province in India. . . . It is by our action at this time that we shall be judged in history. I have no doubt, knowing what my own province is, that the judgment of history will not go against us."

Before the proceedings commenced at the meeting on 28th October, Sir Harcourt Butler paid a warm tribute to the services of Sir John Campbell, who has since retired from the service. His Honour congratulated Sir John Campbell on his valuable work as president of the United Provinces War Board. Sir Harcourt referred in detail to the measures being taken to alleviate the acute agricultural situation in the provinces. He said the situation was well in hand and would be closely watched. The Lieut. Governor also dealt with the influenza outbreak. The **Co-operative Societies** (Amendment) Bill, 1918, was introduced and referred to a Select Committee. Mr. O'Donnell, Chief Secretary, introduced the United Provinces **Public Gambling** (Amendment) Bill and Mr. Chatterjee introduced the United Provinces Excise (Amendment) Bill, 1918, which were referred to Select Committees. A resolution moved by Mr. Chintamani, proposing the appointment of a committee to introduce some form of mechanical transport of goods between Kathgodam and Naini Tal in order to do away with cooly labour, was accepted by the Government.

At the meeting on 16th December the Gorakhpur Goraits Bill was passed. The introduction of the Primary Education Bill by the Hon'ble Rai Anand Sarup Bahadur found unanimous support and has been referred to a Select Committee, who are to report within six weeks. The Raja of Jehangirabad's resolution recommending His Honour the Lieutenant-Governor to request the Viceroy to convey the Council's **loyal message** elicited warm support, His Honour saying it would give him the greatest pleasure to forward it to His Excellency. Sir Harcourt Butler, after paying a tribute to those who have fallen in the War and to those who had given their limbs and their health in order that the world might enjoy freedom and material prosperity, said that any fears that the British people would go behind the pledge of the 20th August 1917 regarding India were quite unnecessary and superfluous. The Council adjourned to the 24th January.

Punjab Legislative Council.

The year 1918 was one of considerable activity in the Punjab Legislative Council, no less than eleven meetings having been held. It will also be memorable on account of the Punjab's ready and cheerful response to the Premier's call to India in proof of which loyal pledges to support the resolutions of the Delhi War Conference were given by non-official members in their budget speeches.

Among the legislative enactments for the year were the following: **The Simla House** Act, which was passed in the previous year, was twice amended. The first amendment extended the scope of the Act to afford relief to Government and Municipal servants. The second aimed at removing various defects in details which had been pointed out by the Simla House Accommodation Committee. There was some opposition to the Bill both before it was relegated to a special committee and after the submission of their report, but the rules of business were suspended and the Bill was passed on December 7th. The **Habitual Offenders'** Bill, introduced in 1917, was passed at the first meeting of the Council in 1918, the Act marking a new departure in the control of criminal tribes in conformity with special measures initiated by Government in January 1917. The Bill encountered unexpected opposition in its final stage though most of its opponents had previously supported it. After keen discussion, the opposition broke down and in the end it passed into law with a substantial majority. Two amending Bills in connection with the **Punjab Municipal** Act were also passed. The first enables the local government to sanction the proposals of Municipal Committees now levying octroi duty to levy a terminal tax instead, thereby dispensing with the sanction of the Governor-General in Council. The second amendment gave power to the committees of certain hill municipalities to license persons impelling or carrying private carriages.

The **Juvenile Smoking** Bill, designed to repress the smoking habit among persons under 16, raised some interesting discussion and was eventually passed with various amendments, Government remaining neutral. The **Village and Small Towns Patrol** Bill was also the subject of a notable debate, His Honour the President having to explain to its opponents that it was an emergency measure which Government would only employ in the event of a serious situation. The Bill was passed with slight amendments. The **Punjab Courts** Act Amendment and Validation Bill was introduced to remedy a defect caused by a clerical error which tended to vitiate the operation of the Act. It was passed with a few verbal alterations at a special sitting held at the University Senate Hall on May 4 after the Punjab War Conference. The Punjab **Compulsory Education** Bill, intended to provide for the introduction of compulsory education in areas which were fit for it and where the local authorities judged there was a genuine demand for it, was referred to a select committee on April 24th and at the November sitting other members were added to the Committee, the Bill being still under consideration. Another Bill, which was introduced during the year but left in abeyance, was the **Adulteration of Food** Bill. A Bill to amend the Punjab District Boards Act of 1883 was passed on November 20. It provided for the continuance in office of a member of a district board after the expiry of the statutory period of three years and for the curtailment of a term of office before the expiry of such period.

Apart from legislation some instructive debates took place on various resolutions moved by non-official members. On February 7th the Hon. Mr. Fazl-i-Hussain moved a resolution recommending that the unspent balance of the Government of India assignments and allotments for sanitation in this province should be spent in the current year and in the next financial year. The resolution elicited some telling criticism from the Financial Secretary (Mr. Lumsden) and a spirited vindication of the work of the Sanitary Board by Mr. Maynard, the Chairman of the Board, and was eventually withdrawn.

On March 13, the **Financial Statement** for 1918-19 was presented by the Hon. Mr. Lumsden and explanatory statements were made by members in charge of departments. The Hon. R. B. Ram Saran Das moved a resolution to provide Rs. 3 lakhs for additional grants to District Boards for road-making which was withdrawn on the Financial Secretary's promise to provide Rs. 2 lakhs for the purpose if the financial position permitted. The Budget discussion occupied the Council for three days, namely, April 24th, 25th and 26th. Non-official members paid tributes to the Lieutenant Governor and the province on the services of the Punjab to the Empire and gave assurances to Government that the Punjab would fight for victory over the German menace to the last man and the last rupee. The debate was brought to a close by the Lieutenant Governor, who reviewed the session and referred to the satisfactory financial position of the province and to internal administration. Industrial progress, he said, was marked and crime on the decrease. He hoped that all Punjabis, including the educated classes, would respond to the Empire's urgent call in one united effort. Dealing with the Budget, which was a **"prosperity" budget**, he showed that during the last five years while expenditure had steadily grown, income had risen in greater proportion Income exceeded the estimates by Rs. 26 lakhs, while expenditure fell short of it by Rs. 38 lakhs. For the next year the budgeted income was Rs. 550 lakhs, or Rs. 31 lakhs above the estimates for the past year and expenditure was Rs. 549 lakhs or Rs. 31 lakhs more than it was arranged to spend and Rs. 69 lakhs more than would probably have been spent within the past year. Working on these estimates the year would close with a balance of Rs. 191 lakhs on the credit side. His Honour congratulated the Finance Committee,—now a strong and representative body —on the pains they had taken to secure an equitable distribution of unallotted expenditure.

The greatest additions in allotments, as compared with the last Budget, were under Land Revenue (Rs. 4½ lakhs), Forests (Rs. 4½ lakhs), Education (Rs. 8 lakhs), Agriculture (Rs. 5 lakhs), Civil Works (Rs. 7 lakhs).

The Hon. R. B. Ram Saran Das moved a resolution proposing to revoke the existing rules regarding grain compensation allowance and to restore the previous system. The resolution was, however, withdrawn after the Financial Secretary had defended the present system and His Honour the President had offered to appoint a small committee of officials and non-officials to examine the question and report to Government if anything could be done to remove any possible hardship to the persons concerned.

The November session opened with a resolution moved by His Honour offering loyal congratulations to His Majesty on the victory, gratitude for the inclusion of an Indian representative at the Peace Conference and renewed assurance of loyalty. Various non-official members and also the Hon. Mr. Maynard, Vice-President, supported the resolution which was carried with acclamation all standing. A tribute was also paid at this meeting by the President to the memory of the late Mr. Gracey who was Secretary and for many years a member of the Council.

In connection with the **Reforms Scheme,** non-official members had given notice of some 24 resolutions, many of which overlapped. His Honour having explained the attitude of Government left the Council to discuss these matters under the Chairmanship of the Vice-President and with the assistance of a few other officials, who did not take any active part in the discussions. This agenda was disposed of at two sittings on November 20th and 21st, the second of which lasted until a late hour in the evening. Among the most important resolutions passed by the non-official members were those dealing with the franchise, Mahomedan representation in Council, the equality of status of the Punjab in the matter of reforms with the three Presidency and the United Provinces, equality of the Governor of the Punjab in status and emoluments with the three Presidency Governors, division of reserved and transferred subjects in provincial administration, the appointment of at least two Ministers for the Punjab, and a general resolution approving the Reform Scheme as a whole subject to certain modifications. The franchise resolutions naturally evoked most heated discussion. The Hon. R. B. Choudhri Lal Chand made a telling speech in championing the claims of the rural classes, and his resolution providing for separate representation of the rural and urban classes and for representation based on population was eventually passed. The resolution claiming 50 per cent. of the representation in the provincial council for the Mahomedan community was also passed after a debate in the course of which the Vice-President from the chair had to appeal to honourable members to abandon sectarianism and leave the question in the hands of the Reforms Committees after recognising each other's just claims. A resolution by the Sikh spokesman claiming 33 per cent. of the seats for his community was negatived, only the Sikh members supporting it.

Burma Legislative Council.

The first meeting of the year, held on March 13, was also the first over which the new Lieutenant-Governor, Sir Reginald Craddock, presided. In his opening speech he referred with appreciation to Burma's contribution towards war funds and war charities and urged that there should be no relaxation of her efforts. He explained and defended the measures taken by Government for securing the sale and export of the rice crop, on which the prosperity of the province mainly depended. The price fixed for the purchase of paddy on behalf of the Royal Commission on Wheat Supplies, namely, Rs. 105 per hundred baskets *plus* a fixed milling hire, had been criticised both on the ground that it was too high, since it was appreciably higher than the price previously paid in London to representatives of the large milling firms in Rangoon and on the ground that it was too low, since it was considerably lower than the price current during the first quarter of 1917 and so discouraged speculative purchases by brokers. His Honour contended that a higher price would have driven the Commission on Wheat Supplies to seek other markets, while a lower price was unfair to the cultivator, where land tax is assessed on the basis of an average price of Rs. 105, this being the average current price for the first quarter during the previous twenty years in the four chief ports of Burma.

In congratulating the province on its freedom from political controversies, programmes and propaganda such as were fretting India, His Honour referred to the loose talk about the separation of Burma from India and her constitution as a Crown Colony. His own impression of the feeling of Burma was that "Burma is proud to form part of the Indian Empire and has no desire to be separated from India." What she does demand is "a recognition that she is not one of several Indian provinces but a distinct country, a Burman province attached to the Indian Empire; and that her treatment in respect of matters administrative, financial, commercial, industrial and political, should not be brought into any rigid conformity with that found suitable for Indian provinces, but should be devised on lines which will give to Burma her best chance of development as a Burman pro-

vince and to the Burman races the best chance of playing the fullest part in this development."

The Hon. Mr. Thompson moved for leave to introduce the Burma Oil-Fields Bill. This was a bill to amend the **Upper Burma Oil-Fields Regulation,** which had for its object the prevention of fire and of flooding due to careless methods of veiling through water-bearing strata, and to extend the provisions of the Regulation to Lower Burma, where oil had recently been discovered. The bill was referred to a Select Committee with instructions to report on it by the 12th April.

The Hon. Mr. Keith then presented the **Revised Financial Statement**. The actuals for 1916-17 showed receipts of 32¼ lakhs more and expenditure of 15 lakhs less than the estimates. The closing Provincial Balance was 117¾ lakhs or 61 lakhs better than was anticipated. The increase in receipts was mainly due to an expansion of forest revenue, which thanks to a favourable combination of circumstances was the highest ever known. Savings were effected by the postponement of all but the most urgent public works and by the absence of a large number of civil officers on military duty. The Revised Estimates for the current year showed receipts of 551¼ lakhs or 37 lakhs less than the original estimate. This reduction was caused by the decision of the Local Government not to press for the punctual payment of land revenue in February and March but to allow some 45 lakhs to remain outstanding beyond the end of the financial year. Forest revenue was ten lakhs and income-tax four lakhs better than the estimate, but stamps were two lakhs worse. Expenditure was 577¼ lakhs or 26½ lakhs less than the original estimate owing mainly to savings under the head of Public Works, Police and Land Revenue charges. The year was expected to close with a balance of 92 lakhs or four lakhs above the sanctioned Budget estimate.

In the Budget estimate for 1918-19 receipts, swollen by the collection of arrears of land revenue, amounted to 645 lakhs. Provision was made for an expenditure of 614¾ lakhs. Expenditure on Forest Conservancy and works necessitated by increased extraction of timber through departmental agency accounted for an increase of 5½ lakhs above the actuals of 1916-17, and education for an increase of 10½ lakhs. To Public Works were allotted 20 lakhs more than the actuals of 1916-17. Three lakhs were to be spent on the new scheme for dredging the waterways of the Irrawaddy Delta. The closing balance was estimated at 122½ lakhs. The Hon. Member concluded his speech with the words, "We are in the fourth year of a world-wide war and we have reason to be grateful that so far our financial troubles have been so small."

The second meeting was held on April 12. After the Hon. Mr. Webb, in reply to the Hon. Mr. DuBera, had stated what stage had been reached by certain bills affecting Rangoon, the Hon. Mr. Thompson presented the report of the Select Committee on the Burma Oil-fields Bill, and the bill was passed.

The Hon. Mr. Keith presented the Budget estimates for 1918-19 which had been approved by the Government of India. Discussion was postponed to the following day. At the third meeting on April 13, in the general discussion of the Budget, the Hon. Mr. Lim Chin Tsong referred to the expulsion of a number of Chinese from Tharrawaddy District in connection with the efforts of the Deputy Commissioner to reduce crime attributed to opium smuggling. He urged the Government to follow the example of China by prohibiting the use of opium. Or if that were impossible he suggested that the opium-eater for whom the drug had become a necessity should consume his daily allowance at the shop and carry none away. In his reply the Hon. Mr. Keith defended the policy of Government, pointed out that in spite of financial stringency Government had taken measures to reduce the consumption of opium, and asserted that the chief obstacle with which Government had to contend was the Chinese smuggler and hawker. He added "There are only 124 licensed opium-shops in this province, and an order prohibiting the consumption of opium, save in these shops, would be less easy to enforce and less capable of justification than prohibition pure and simple."

The Hon. Maung Po Tha lamented the high price of cattle, which he stated, cost Rs. 80 or Rs. 100 per head. He urged the encouragement of cattle breeding and the prohibition of slaughter of bullocks for food. By this means he anticipated an increase in the number of cattle available for agriculture by nearly two millions in ten years, with a consequent reduction of price to Rs. 10 per head, the rate in the good old days of Burmese rule.

The Hon. Mr. Goodliffe in this connection reminded Government of the recommendations of the stock-breeding committee and asked that steps be taken to give effect to them.

The Hon. Mr. Keith showed by reference to the proceedings of the **Stock-breeding Committee** and to official returns that the increase of cattle in ten years had been 35 per cent., and that while there was a deficiency in the coastal districts of the delta there had been over-breeding in Upper Burma and Arakan. There was little demand for good beef and the annual slaughter of cattle was less than 100,000 head, most of them worn out and barren animals. In the days when cattle were Rs. 10 per head, the prices of other commodities were correspondingly low and a reduction of price to that figure would hardly encourage cattle breeders.

The Hon. Maung Nyun discussed various **educational questions:** religious instruction, the encouragement of Pali, the abolition of the Calcutta Matriculation Examination, and free compulsory education. He suggested that religious works in Pali should be taught in vernacular schools from the bottom standards upward in lieu of elementary science and object lessons, and that Pali and Burmese literature should form part of the curriculum for normal students. He protested against the recent order abolishing the Calcutta University Matriculation Examination on the ground that over a period of seven years from 1909 to 1916 the Matriculation examiners passed 71 per cent. of the candidates, while the High School Final examiners passed only 47 per cent. He asked that vernacular education should be compulsory for children between

the ages of 6 and 11 years, that attendance at a monastic school should be accepted as compliance with the order, and that the traditional methods of the monastic school should not be interfered with

The Hon. Mr. Webb pointed out the difficulties in the way of the Hon. Member's proposals with regard to the teaching of the Pali text and the curriculum of normal schools but promised to refer these questions to the Education Department for consideration by the Educational Syndicate and the Text Book Committee. These proposals were vetoed. The Divisional Education Boards with one exception condemned the introduction of Pali texts in vernacular schools. He reminded the Council that the proposal to discontinue the Matriculation Examination had been supported by the managers of all the High Schools in the province, only two expressing any doubts whatsoever. He considered it unnecessary to revise the orders merely to give weak students who might fail in the High school examination a second chance in an examination of a lower standard. He quoted the extract from the Resolution on the Educational Policy of the Government of India issued in 1913, stating that the time had not yet arrived for free elementary education. Burma already occupied an advanced position as regards literacy, and in the five years, 1912-17, primary schools for boys had increased by 42 per cent. and attendance by 38 per cent. The local Government in 1916, at a heavy cost to Provincial revenues, had released municipalities and local funds from responsibility for expenditure on Anglo-vernacular education, thereby enabling them to devote their means and energies to the expansion of vernacular education.

His Honour, the President, in his concluding speech mentioned the great enemy offensive in France, the call of the Prime Minister for further efforts from all parts of the Empire, and the coming War Loan. The inconveniences to which Burma had been subjected in the course of the war were trivial compared with those borne cheerfully in the United Kingdom. If the recommendations of the various committees appointed to investigate matters of interest to the province had not been followed by immediate action, it must be remembered that all the developments contemplated, depended on the sufficiency of financial resources. The time had come for a readjustment of relations between Imperial and Provincial finance, and if Burma's case were clearly stated there could be no fear that she would not be generously treated. He hoped before the Council met again to have something more definite to say on those various subjects. Meanwhile, he reminded members that in comparison with the war everything was petty and nothing of urgent importance. All must exercise patience and a due sense of proportion.

Constitutional Reform.

On August 20th, 1917, the Right Hon'ble E. S. Montagu, His Majesty's Secretary of State for India, made the following announcement in the House of Commons :—

" The policy of His Majesty's Government, with which the Government of India are in complete accord, is that of the increasing association of Indians in every branch of the Administration, and the gradual development of self-governing institutions with a view to the progress realisation of responsible government in India as an integral part of the British Empire. They have decided that substantial steps in this direction shall be taken as soon as possible and that it is of the highest importance as a preliminary to considering what these steps should be, that there should be a free and informal exchange of opinion between those in authority at home and in India. His Majesty's Government have accordingly decided, with His Majesty's approval, that I should accept the Viceroy's invitation to proceed to India to discuss these matters with the Viceroy and the Government of India, to consider with the Viceroy the views of local Governments ,and to receive with him the suggestions of representative bodies and others. I would add that progress in this policy can only be achieved by successive stages. The British Government and the Government of India on whom the responsibility lies for the welfare and advancement of the Indian peoples, must be judges of the time and measure of each advance, and they must be guided by the co-operation received from those upon whom new opportunities of service will thus be conferred, and by the extent to which it is found that confidence can be reposed in their sense of responsibility. Ample opportunity will be afforded for public discussion of the proposals, which will be submitted in due course to Parliament."

THE MONTAGU-CHELMSFORD REPORT.

In accordance with the policy outlined in that statement, Mr. Montagu visited India in the cold weather of 1917-18 and in July of the latter year there was published the Report on Indian Constitutional Reforms which had been signed by the Secretary of the State and the Viceroy on 22nd April. The proposals set forth in that report are really the application to practical conditions of four general propositions. For the sake of clearness, these propositions may be set out thus—

I.—There should be, as far as possible, complete popular control in local bodies, and the largest possible independence for them of outside control.

II.—The provinces are the domain in which the earliest steps towards the progressive realisation of responsible Government should be taken. Some measure of responsibility should be given at once, and our aim is to give complete responsibility as soon as conditions admit. This involves at once giving the provinces the largest measure of independence, legislative, administrative and financial, of the Government of India which is compatible with the due discharge by the latter of its own responsibilities.

III.—The Government of India must remain wholly responsible to Parliament, and saving such responsibility its authority in essential matters must remain indisputable, pending experience of the effect of the changes now to be introduced in the provinces. In the meantime the Indian Legislative Council should be enlarged, and made more representative, and its opportunities of influencing Government increased.

IV.—In proportion as the foregoing changes take effect, the control of Parliament and the Secretary of State over the Government of India and Provincial Government must be relaxed.

What has been done by the proposals may be summarised in the words of those who drew them up.

What we have done is to afford Indians a fair share in the Government of the entire country, while providing in the provinces the means for them to attain the stage of responsible government, to which the beginning of responsibility for the Government of India itself must be the sequel.

The Proposals.

Local self-government does not really fall within the scope of these proposals at all, since the aim of Government is to place the institutions connected with it entirely under popular control. As is universally recognised, the growth of local self-government is intimately connected with educational extension and educational reform. It is part of the contemplated political advance that the direction of Indian education should be increasingly transferred to Indian hands. Progress all along the line must depend upon the growth of electorates and the intelligent exercise of their powers; and men will be immensely helped to become competent electors by acquiring such education as will enable them to judge of candidates for their votes, and of the business done in the Councils. The reformed Councils contemplated in this Report will be in a position to take up and carry forward boldly proposals for advance along the lines both of local self-government and of education.

Provincial Governments.—The object of the proposals is the progressive realisation of responsible government. Responsible government implies two conditions, first, that the members of the executive government should be responsible to their constituents, and secondly that these constituents should exercise their power through the agency of their represen-

tatives in the Assembly. These two conditions entail first, that there exist constituencies based on a franchise broad enough to represent the interests of the population generally, and capable of selecting representatives intelligently; secondly, that there is recognised the constitutional practice that the executive government cannot retain office unless it commands the support of a majority in the Assembly. In India, these conditions are not realised. There must be a period of political education which can only be achieved through the gradually expanding exercise of responsibility. Practical considerations, such as those outlined in paragraph 9, make the immediate handing over of complete responsibility impossible. Accordingly, the principle is adopted of transferring responsibility for certain functions of Government while reserving control over others, *while at the same time establishing substantial provincial autonomy.*

Financial Devolution.—Since substantial provincial autonomy is to be a reality, the provinces must not be dependent on the Indian Government for the means of provincial development. The general idea of these proposals on this matter is that an estimate should first be made of the scale of expenditure required for the upkeep and development of the services which clearly appertain to the Indian sphere: that resources with which to meet this expenditure should be secured to the Indian Government: and that all other revenues should then be handed over to the provincial Governments which will thenceforth be held wholly responsible for the development of all provincial services. The principal change in detail will be the abolition of divided heads of revenue. Indian and provincial heads of reveue are to be retained as at present: but to the former income tax and general stamps are to be added, and to the latter land revenue irrigation, excise and judicial stamps. It follows that expenditure on famine relief and the protective irrigation works will fall upon the provinces, though in the matter of famine relief, the Indian Government could never wholly renounce responsibility in the case of any failure on the part of the provinces.

This arrangement will leave the Government of India with a large deficit. In order to supplement this, it is proposed to assess the contribution from each province to the Government of India as a percentage of the difference between the gross provincial revenue and the gross provincial expenditure.

On the basis of the figures taken by the framers of the proposals this percentage works out at the figure of 87, and would constitute the first charge upon the provincial revenues. The figure may be open to revision hereafter, but not subject to change for a period of, say, six years. And in the event of sudden emergency it must be open for the Central Government to make a special supplementary levy upon the provinces.

Provincial Taxation.—It is proposed that a schedule of taxation should be drawn up in consultation between the Government of India and the provincial Governments. In this schedule certain subjects of taxation are to be reserved for the provinces, the residuary powers being retained with the Government of India. A tax falling within the schedule would not require the Government of India's previous sanction to the legislation required for its imposition, but the Bill should be forwarded to the Government of India in sufficient time for the latter to satisfy itself that the Bill is not open to objection as trenching upon the Central Government's field.

Provincial Borrowing.—In order to avoid harmful competition, it is recommended that Provincial Governments continue to do their borrowing through the Government of India. But if the Government of India find itself unable to raise the money in any one year which a province requires, or if there is good reason to believe that a provincial project would attract money not to be elicited by a Government of India loan, it is proposed that the Provincial Government might have recourse to the Indian market.

While the above proposals will give Provincial Governments the liberty of financial action which is indispensable, these Governments must also be secured against unnecessary interference by the Government of India in the spheres of legislative and administrative business. Accordingly, while the Government of India is to retain a general overriding power of legislation, for the general protection of all the interests for which it is responsible, the provincial legislatures are to exercise the sole legislative power in the spheres marked off for provincial legislative control. It is suggested that it might be recognised as a matter of constitutional practice that the Central Government will not interfere with the operations of the provincial legislatures unless the interests for which it is itself responsible are directly affected.

Executive Government in the Provinces.

In all the provinces, there is to be collective administration, the system of a Governor in Council. At the head of the Executive will be the Governor, with an Executive Council of two members, one Englishman and one Indian, both nominated by the Governor. Associated with the Executive Council as part of the Government will be one or more Ministers chosen by the Governor from among the elected members of the Legislative Council and holding office for the life of the Council.

We have seen that complete responsibility for the Government cannot be given immediately without inviting a breakdown. Some responsibility must, however, be given at once. Accordingly the plan is adopted of making a division of the functions of the Provincial Government, between those which may be made over to popular control and those which for the present must remain in official hands. How the division is to be made is explained in paragraph 28 below. These functions may be called "transferred" and "reserved" respectively. It is proposed that in the Provincial Executive constituted as explained in paragraph 19, the Governor in Council would have charge of the reserved subjects. This would be one part of the Executive. The other part of the

Executive would consist of the Governor and Minister or Ministers and would deal with the "transferred" subjects. As a general rule the Executive would deliberate as a whole although there would necessarily be occasions upon which the Governor would prefer to discuss a particular question with that part of the Government directly responsible. The decision upon a transferred subject and on the supply for it in the provincial budget would be taken after general discussion by the Governor and his Ministers; the decision on a reserved subject would be taken after similar discussion by the Governor and the members of his Executive Council.

Relation of the Governor to his Ministers.—The Ministers would not hold office at the will of the legislature but at the will of their constituents. Their salary while they were in office would be secured to them and not be at the pleasure of the Legislative Council. They, together with the Governor, would form the administration for the transferred subjects. It is not intended that the Governor should, from the first, be bound to accept the decision of his Ministers, because he will himself be generally responsible for the administration. But it is also not intended that he should be in a position to refuse assent at discretion to all his Minister's proposals. The intention is rather that the Ministers should avail themselves of the Governor's trained advice upon administrative questions, while he on his part would be willing to meet their wishes to the furthest possible extent, in cases where he realises they have the support of popular opinion.

Where the Governor himself has no official experience of Indian conditions he may desire to add one or two **additional members** from among his officials as members without portfolio, for the purpose of consultation and advice. It is proposed that he should be allowed to do this. Also where the press of work is heavy it may be desirable to appoint some members of the Legislative Council to positions analogous to that of Parliamentary Under Secretary in Great Britain, for the purpose of assisting members of the Executive in their departmental duties and of representing them in the Legislative Council.

Provincial Legislatures.

In each province, it is proposed to establish an enlarged Legislative Council, differing in size and composition from province to province, with a substantial elected majority elected by direct election on a broad franchise, with such communal and special representation as may be necessary. The breadth of the franchise is all-important: it is the arch upon which the edifice of self-government must be raised. The exact composition of the Council in each province will be determined by the Secretary of State in Council on the recommendation of the Government of India, as a result of an investigation into subjects connected with the franchise, the constituencies and the nominated element. It is proposed that this investigation should be undertaken by a Committee consisting of a Chairman chosen from outside India, two experienced officials and two Indians of high standing and repute. The Committee would visit each province in turn in order to investigate local conditions, and in each province one civilian officer and one Indian appointed by the provincial Government would join and assist it with their local knowledge.

It is proposed that the **communal electorates** though constituting an obstacle to the realisation of responsible government, should be retained for the Muhammadan community. Communal electorates are to be extended to the Sikhs, now everywhere in a minority and virtually unrepresented. For the representation of other minorities, nomination is proposed.

The exact number of **official members** will be for the Committee mentioned in paragraph 23 above, to consider. Members of the Executive Council should be *ex-officio* members of the Legislative Council, and there should be enough official members to provide the Government with first-hand knowledge of the matters likely to be discussed both in Council and in Committee. It is suggested that a convention might be established that official members should refrain from voting upon transferred subjects.

It is proposed that to each department or group of departments whether under a Minister or under a member of the Executive Council there should be attached a **Standing Committee** elected by the Legislative Council from among their own members. The functions of the Standing Committee would be advisory: they should see, discuss, and record their opinion upon, all questions of policy, all new schemes involving expenditure above a fixed limit and all annual reports upon the working of the departments. The member or Minister in charge of the departments concerned should preside.

Effect of Resolutions.—It is not proposed that resolutions, whether on reserved or transferred subjects should be binding; but the Council will influence the conduct of all reserved subjects and effectively control the policy in all transferred subjects. If a member of the Legislative Council wishes Government to be constrained to act in a certain way, it will often be open to him to bring in a Bill to effect his purpose; and when Ministers become, as it is intended that they should, accountable to the Legislative Council, the Council will have full means of controlling their administration by refusing their supplies or by carrying votes of censure. Subject to the sanction of the Governor, the Council will have the power of modifying the rules of business; all members will have the right of asking supplementary questions.

Divisions of Functions of Government.—It being assumed that the entire field of provincial administration is marked off from that of the Government of India it is suggested that in each province certain definite subjects should be transferred for the purpose of administration by Ministers. All subjects not so transferred would remain in the hands of the Governor in Council. The list of transferred subjects would vary from province to province, and would naturally be susceptible to modification at subsequent stages. It is suggested that the work of division be done by a Committee similar in composition to the one described in paragraph

3 above, with which it would work in close o-operation, since the extent to which the esponsibility can be transferred is related o the nature and extent of the provincial lectorates. Having first marked off the field f provincial administration the Committee ould proceed to determine which of the rovincial subjects could be transferred. Their uiding principles should be to include in the ransferred list those departments which afford ost opportunity for local knowledge and social ervice, those in which Indians have shown hemselves to be keenly interested, those which tand in most need of development. Such is the rocess of division. The Departments naturally nding themselves to classification as transferred ubjects are taxation for provincial purposes, ocal self-government: education: public works: griculture: excise and local industries.

In cases where it is subsequently open to doubt a which category a subject falls the matter hould be considered by the entire Government ut the final decision should lie definitely with he Governor.

In cases of matters made over to non-official ontrol, there should in emergency be the possiility of re-entry either to the official executive overnment of the province or to the Governent of India.

Affirmative Power of Legislation.—ssuming that the Legislative Councils have een reconstituted with elective majorities, nd that the reserved and transferred subjects ave been duly demarcated, we have now o consider how the executive government is to ecure the passage of such legislation as it considers necessary for carrying on its business. he King's Government must go on. The rocess to be followed is this. For the purpose f enabling the provincial Government to carry egislation on reserved subjects it is proposed hat the Head of the government should have ower to certify that a particular bill is "essenial to the discharge of his responsibility for the eace or tranquility of the province or of any art thereof, or for the discharge of his responibility for the reserved subjects." Such a ertificate would not be given without strong eason and the Council might by a majority ote request the Governor to refer to the Goernment of India, whose decision would be nal. If no reference was made, or if the Government of India decided that the Bill was roperly certificated, the Bill would then be utomatically referred to a Grand Committee f the Legislative Council.

The **Grand Committee** in every Council would comprise 40 to 50 per cent. of its strength nd would be chosen for each Bill, partly by allot and partly by nomination. The Governor would have power to nominate a bare majority xclusive of himself, and of the members so ominated, not more than two-thirds should be fficials. The elected members would be elected *ad hoc* by the elected members of Council. The Bill would be debated in Grand Committee, and f passed by that body, would be reported to the whole Council, which might discuss but could not reject or amend it except on the motion of a member of the Executive Council. The Governor would appoint a time limit within which a Bill might be debated, and after the expiry of the time limit the Bill would pass automatically. If the Bill were not passed by the Grand Committee it would drop.

Should a Bill on a transferred subject trespass on the reserved field of legislation, it should be open to a member of the Executive Council to challenge the whole Bill or any clause of it on its first introduction, or any amendment as soon as such amendment is moved, on the ground of infringement of the reserved sphere. The Bill, clause, or amendment would be then referred to the Governor, who might allow it to proceed or certify it, in accordance with the procedure of paragraph 31 (above).

The Governor of a Province should have **power to dissolve** the Legislative Council.

The **assent** of the Governor, the Governor-General, and the Crown, through the Secretary of State, will remain necessary for all provincial legislation, whether certified or not.

It is suggested that **budget procedure** be as follows: The provincial budget should be framed by the executive government as a whole. The first charge upon the provincial revenues will be the contribution to the Government of India. Next will come the supply for the reserved subjects. So far as the transferred subjects are concerned, the allocation of supply will be decided by the Ministers; and if the revenue available is insufficient for their needs, the question of additional taxation will be decided by the Governor and the Ministers. The budget will then be laid before the Council, which will discuss it and vote by resolution. The budget would be altered in accordance with the resolutions of the Council except in the following case. If the Council reject or modify the allotment of reserved subjects, it would be in the Governor's power to certify its necessity, in the terms mentioned in paragraph 31 (above) and to insist upon the retention of the allotment which he declares essential for the discharge of his own responsibilities.

Safeguards.

A great safeguard to the working of the system is the proposal that a periodic Commission shall review proceedings. Both the Government on one hand and the Legislative Council on the other, will decide their course of action in the knowledge that their conduct will in due course come under review by a Commission. Before this Commission there will be an opportunity of arguing, on the one hand, that the reserved subjects have been extravagantly administered, or that the Governor in Council has unnecessarily disregarded the wishes of the Legislative Council, or on the other hand, that the attitude of the Legislative Council with regard to expenditure upon reserved subjects has been so unreasonable as to make it unsafe to transfer further powers.

It is suggested that ten years after the meeting of the new Councils, a **Commission** should be appointed to review the whole working of these institutions in order to determine whether it would be possible to improve in any way the existing machinery or to advance further toward

the goal of complete responsible government in any province or provinces. This Commission should be authoritative, deriving its authority from Parliament itself; and the names of the commissioners should be submitted by the Secretary of State to both Houses for approval. The functions of the Commission will, indeed, be of the utmost importance: it will represent a revival of the process by which the affairs of India were subjected to periodical examination by investigating bodies appointed with the approval of Parliament. It is proposed that the further course of constitutional development in the country shall be investigated at intervals of twelve years.

The Commission should also consider the progress made in admitting Indians to the higher ranks of the Public Service: the adjustment of the financial burden between the provinces: the development of education: the working of local self-government: the constitution of electorates: the working of the franchise: and similar matters.

Development in the Provinces.—The proposal is that as the popular element of the Government acquires strength and experience, subjects will be taken from the reserved list, and placed upon the transferred list until at length the reserved subjects disappear and the goal of complete responsibility is attained. It is suggested that after five years from the first meeting of the new Councils, the Government of India should hear applications from the provincial Governments or the provincial council for the modification of the reserved and transferred lists of the province; and that after hearing the evidence they should recommend to the Secretary of State such changes as may seem desirable.

It is desirable also to complete the responsibility of Ministers for the transferred subjects. It should be open for the Government of India when hearing such applications, to direct that the Minister's salaries, instead of being secured to them for their period of office should be specifically voted year by year by the Legislative Council: and it should be open to the Legislative Council to demand a resolution that Minister's salaries should be so voted. This would result in the Ministers becoming Ministers in the Parliamentary sense, dependent upon a majority in the legislature.

Government of India.

The general idea of the proposals is to create an enlarged Legislative Assembly with an elected majority: to reserve to the decision of a new Council of State, in which Government will have a bare majority, only those measures which it must retain power to carry in discharge of its continued responsibility for the good government of the land: to restrict the official *bloc* to the smallest dimensions compatible with same principles: to institute a Privy Council: and to admit a second Indian Member into the innermost counsels of the Indian Government.

Pending the development of responsible government in the provinces, the Government of India must remain responsible only to Parliament, and saving that responsibility, must retain indisputable power in matters which it judges to be essential to the fulfilment of its obligations for the maintenance of peace, order and good government.

The Executive Council.—It is recommended that the existing statutory restrictions in respect of the appointment of members should be abolished to give greater elasticity in the size of the government and the distribution of work.

It is recommended that another Indian member be appointed as soon as may be.

The Legislature.—It is proposed that the strength of the Legislative Council to be known henceforth as the Legislative Assembly of India, should be raised to a total strength of about 100 members. Two-thirds of this total should be returned by election: one-third to be nominated by the Governor-General and of this third not less than a third again should be non-officials representing minorities or special interests, such as European and Indian commerce, and the large landlords. The normal duration of an Assembly to be three years.

Electorates and constituencies for the Indian Legislative Assembly should be determined by the same Committee entrusted with the investigation of electorates and constituencies for the provincial Councils.

The power of **nomination of non-official members** is to be regarded as a reserve in the hands of the Governor-General enabling him to adjust inequalities and supplement defects in representation. Nominations should not be made until the results of the elections are known and should be made after informal consultation with the Heads of Provinces.

The maximum number of **nominated officials** will be two-ninths and it will rest with the Governor-General to determine whether he requires to appoint up to the maximum. Official members of the Assembly other than members of the Executive Government, should be allowed a free right of speech and vote except when Government decides their support is necessary.

Special Appointments.—Members of the Assembly, not necessarily elected or non-official, may be appointed to positions analogous to those of Parliamentary Under Secretaries in England. The President of the Legislative Assembly should be nominated by the Governor-General.

Affirmative Power of Legislation.—During the transitional period, the capacity of the Government of India to obtain its will in essential matters necessary for the good government of the land is to be secured by the creation of a second chamber known as the Council of State, which shall take its part in ordinary legislative business and shall be the final legislative authority in matters which the Government regards as essential. The object is to make assent by both bodies, the normal condition of legislation; but to establish the principle that in the case of legislation certified by the Governor-General as essential to the interests of peace, order and good government, the will of the Council of State should prevail.

The **Council of State** will be composed of 50 members exclusive of the Governor-General who would be President. Not more than 25 members including the members of the Executive Council would be officials, and four would be non-officials nominated by the Governor-General. There would be 21 elected members returned by non-official members of the provincial legislative councils, each council returning two members with the exception of Burma, the Central Provinces and Assam which would return one member each. The remaining 6 elected members are to supplement the representation of the Muhammadans and the landed classes and to provide for the representation of the Chambers of Commerce. The Council of State is to possess a senatorial character and the qualifications of candidates for election should be so framed as to secure men of the status and position worthy of the dignity of a revising chamber. Five years would be the normal duration of a Council of State.

Legislative Procedure.

Ordinarily a Government Bill will be introduced into the Legislative Assembly and after being carried through the usual stages there would go to the Council of State. If there amended in a way which the Assembly is not willing to accept it would be referred to a joint session of both houses by whose decision its fate would be decided. But if the amendments introduced by the Council of State were in the view of Government essential to the purpose for which the Bill was originally introduced, the Governor-General in Council would certify them to be essential to the interest of peace, order or good government. The Assembly would then have no power to reject or modify the amendments nor would they be open to revision by a joint session.

A **private Member's Bill** would be introduced into whichever of the two houses the mover sat, and after passing through the usual stages, would be taken to the other chamber and carried through that. In the case of a difference of opinion, the Bill would be submitted to a joint session, by which its final fate would be determined. But if the Governor-General in Council were prepared to give a certificate that the terms already stated that the form of the Bill was prejudicial to peace, order, and good government, the Bill would go, or go back, to the Council of State and only become law in the form there finally given to it.

The general principles of the legislative procedure proposed are that in the case of all save certificated legislation, the will of the non-official members of both chambers taken together should prevail, while in the case of certificated legislation, the Council of State should be the final authority.

Power of Dissolution, etc.—The Governor-General should have power at any time to dissolve the Legislative Assembly, the Council of State or both bodies. The Governor-General and the Secretary of State naturally retain their existing powers of assent, reservation and disallowance to all Acts of the Indian legislature.

Fiscal legislation will be subject to the procedure recommended in respect of Government Bills. The budget will be introduced into the Assembly, but the Assembly will not vote it. Resolutions upon budget matters and upon all other questions whether moved in the Assembly or in the Council of State will continue to be advisory in character.

Standing Committees, drawn jointly from the Assembly and from the Council of State, should play, so far as possible under the circumstances, a similar part to that suggested in the case of the Standing Commttees in the provincial legislatures.

Any member of either House might be entitled to ask **supplementary questions.** The Governor-General should not disallow a question on the ground that it cannot be answered consistently with the public interest, but power is still to be retained to disallow a question on the ground that the putting of it is inconsistent with the public interest.

His Majesty may be asked to be pleased to approve the institution of a **Privy Council in India.** Appointments to be made by His Majesty for life; and such appointments to be confined to those, whether officials or non-officials, from British India and from the Native States, who had won real distinction or occupied the higher offices. The Privy Council's office would be to advise the Governor-General when he saw fit to consult it on matters of policy and administration.

Future Progress.—Equally with the Provincial Machinery the Central Machinery will be subjected to periodical revision by the Commission approved by Parliament.

The India Office.

Since His Majesty's Government have declared their policy of developing responsible institutions in India, Parliament must be asked to set certain bounds to its own responsibility for the internal administration of the country.

In transferred matters.—It should be laid down broadly that in respect of all matters in which responsibility is entrusted to representative bodies in India, Parliament must be prepared to forego the exercise of its own powers of control, and this process must continue as responsibility in the provinces, and eventually in the Government of India itself, gradually develops. Parliament cannot retain the control of matters which it has deliberately delegated to representative bodies in India.

In reserved matters.—While in reserved subjects there cannot be any abandonment by Parliament of ultimate powers of control, there should be such delegation of financial and administrative authority as will leave the Government of India free, and enable them to leave the Provincial Governments free to work with the expedition that is desirable. A wider discretion should be left to the Governor-General in Council; and certain matters now referred home for sanction might in future merely be referred to the Secretary of State for information. It is hoped that Parliament will authorise the Secretary of State to divest himself of the control over the Government of India in certain matters even though these continue to be the concern of official governments.

A Committee should be appointed forthwith to reconsider the **organization of the India Office,** with a view to providing for the material alteration of functions involved by these proposals and for the more rapid discharge of its business.

The Secretary of State's salary should be defrayed from home revenues and voted annually. This would enable any live questions of Indian administration to be discussed by the House of Commons in Committee of Supply.

In order to provide for informed criticism and discussion of questions connected with India, it is proposed that the House of Commons should be asked to appoint a **Select Committee on Indian affairs.** It would inform itself upon Indian questions, and report to the House before the annual debate on the Indian estimates. By means of interrogations of the Secretary of State and requisitions for papers, the members of the Committee would keep themselves referred on their Indian affairs and to them Indian Bills might be informed upon second reading.

The Native States.

In view of the fact that the contemplated constitutional changes in British India may react in an important manner on the Native States, it is necessary to assure the Princes, in the fullest and freest manner, that no constitutional changes which may take place will impair the rights, dignities and privileges secured to them by treaties, sanads and engagements, or by established practice. Further all important States should be placed in direct communication with the Central Government as an aid to good understanding and the speedy conduct of business.

It is recommended that a **Council of Princes** be called into existence as a permanent consultative body, ordinarily meeting once a year to discuss agenda approved by the Viceroy, who should be President. The opinion of such a body would be of the utmost value upon questions affecting the States generally or British Indian and the States in common.

The Council of Princes should be invited annually to appoint a small Standing Committee to which the Viceroy or the Political Department might refer matters of custom and usage affecting the States.

Commissions of Enquiry.—Should dispute arise between two or more States, or between a State and Government, the Viceroy might appoint a Commission of enquiry to report upon the matter in dispute. Such a Commission might be composed of a judicial officer of rank not less than a High Court Judge, and one nominee of each of the parties concerned.

In the case of misconduct, matters might be referred by the Viceroy to a Commisssion appointed to advise him. Such a Commission should ordinarily consist of five members including a High Court Judge, and two Ruling Princes.

Joint Deliberations.—With the establishment of a Council of Princes, of a Council of State, and of a Privy Council, the machinery will exist for bringing the senatorial institutions of British India more closely into touch with Rulers of the Native States. The Viceroy, when he thought fit, might arrange for joint deliberation and discussion between the Council of State and the Council of Princes, and might invite members of the Council of Princes to serve on Committees of the Privy Council.

The Public Services.

The policy of the increasing association of Indians in every branch of the administration was placed in the forefront of the announcement of August 20. The characteristics which have enabled the services to confer benefits upon India in the past, must be adequately maintained in the future; and the solution lies in recruiting year by year such a number of Indians as the existing members of the services will be able to train in an adequate manner and inspire with the spirit of the whole.

Appointments are to be made to all branches of the Public Service without racial distinction.

For all public services, for which there is a system of recruitment in England open to Indians and Europeans alike, there must be a system of appointment in India.

The Civil Service.—It is suggested that thirty-three per cent. of the superior posts should be recruited for in India, and that this percentage should be increased by one and a half per cent. annually, until the period a commission is appointed which will re-examine the whole subject. A re-adjustment of the rates of pay and pension is recommended.

There should be a fixed percentage increasing annually of recruitment in India. This percentage will not be uniform for all Services as the particular figures must depend upon their distinctive characteristics and functions. As in the case of the Civil Service, a re-adjustment of the rates of pay and pension is recommended.

The granting of a considerable number of **King's Commissions** to Indians is recommended. Race should no more constitute a bar to promotions in the Army than it does in the Civil Service.

Industries and Tariffs.

The proposals lay stress upon the necessity for Government action in developing the resources of the country, and for the recognition by Government of the necessity for a forward industrial policy. The extent and form of State assistance will doubtless be determined by the reformed Governments of the future having the advice of the Industrial Commission before them, and with due reference to Imperial interests.

Concluding Note.

The general principle kept in mind in framing these proposals has been the progressive realisation of responsible government. The arrangements contemplated by these proposals are admittedly transitional. They are to be open to revision. The proposals themselves are tentative. They are now open to discussion.

RECEPTION IN THE COUNTRY.

The reception of the Report in the country emphasised the cleavage between the Moderate and Extreme parties in Indian politics which had developed since 1907. The Moderate Party welcomed the proposals as liberal, wise and statesmanlike, whilst advocating changes, especially in the further liberalisation of the Government of India. The Extremists at first tried to stampede the country into the rejection of the Report as a whole; when this procedure was found to be impracticable, such modifications were proposed as would have affected the principles on which the report was based. Special Sessions of the National Congress and of the Moslem League were held in Bombay to consider what action should be taken on the Report; as the differences between the two parties were fundamental, and there was no prospect of compromise, the Moderates as a body absented themselves from the session of the Congress and subsequently held in Bombay a Congress of their own. As the resolutions passed at these conferences illustrate the differences between the two parties, they are given in full and reflect the then prevailing tone of Indian politics.

NATIONAL CONGRESS RESOLUTIONS.

The first two resolutions, which the President, Mr. Imam Syed Hasan, put to the meeting from the chair, were :—

(1) That this Congress tenders its most loyal homage to His Gracious Majesty the King Emperor. The Congress has learned with great satisfaction of the recent successes of the Allies in the war and sincerely prays for their early and decisive victory and the final vindication of the principles of freedom, justice and self-determination.

(2) That this Congress re-affirms the principles of reform contained in the resolutions relating to self-government adopted by the Indian National Congress and the All India Muslim League at Lucknow in December, 1916, and at Calcutta in December, 1917, and declares that nothing less than self-government within the Empire can satisfy the Indian people and by enabling them to take their rightful place as a free and self-governing nation in the British Commonwealth strengthen the connection between Great Britain and India.

Mrs. Besant moved the third resolution, —"(*a*) That this Congress declares that the people of India are fit for responsible Government and **repudiates the assumption to be contrary contained in the report on Indian constitutional reforms.** (*b*) That this Congress entirely disagrees with the formula contained in the said report that the provinces are the domain in which the earlier steps should be taken towards the progressive realisation of responsible Government and that the authority of the Government of India in essential matters must remain indisputable pending experience of the effect of the changes proposed to be introduced in the provinces and this Congress is of opinion that a similar and simultaneous advance is indispensable both in the provinces and the Government of India."

Pandit Gokarnath Misra moved the fourth resolution as follows :—The Government of India shall have undivided administrative authority in matters directly concerning peace, tranquillity and defence of the country subject to the following: That the statute to be passed by Parliament should include the **declaration of the rights of the people of India as British citizens**'—"(*a*) That all Indian subjects of His Majesty and all the subjects naturalised or resident in India are equal before the law, and there shall be no penal nor administrative law in force in the country whether substantive or procedural of a discriminative nature; (*b*) that no Indian subject of His Majesty shall be liable to suffer in liberty, life, property, or in the right of association and free speech, or in respect of writing, except under sentence by an ordinary court of justice, and as a result of a lawful and open trial: (*c*) that every Indian subject shall be entitled to bear arms, subject to the purchase of a license, as in Great Britain and that the right shall not be taken away save by a sentence of an ordinary court of justice; (*d*) that the press shall be free, and no licence nor security shall be demanded on the registration of a press or a newspaper; (*e*) that corporal punishment shall not be inflicted on any Indian serving in His Majesty's Army or Navy, save under conditions applying equally to all other British subjects."

Mr. Ramaswami Aiyar, of Madras, moved:—"This Congress is strongly of opinion that it is essential for the welfare of the Indian people that the Indian legislature should have the same measure of fiscal autonomy which the self-governing dominions of the empire possess."

The Hon. Pandit Madan Mohan Malaviya moved :—"That this Congress appreciates the earnest attempt on the part of the Right Hon. the Secretary of State and His Excellency the Viceroy to inaugurate a system of responsible government in India and while it recognises that some of the proposals constitute an advance on the present conditions in some directions **it is of opinion that the proposals are disappointing and unsatisfactory** and suggests the following modification as absolutely necessary to constitute a substantial step towards responsible government :—(1) That a system of reserved and transferred subjects, similar to that proposed for the Provinces, shall be adopted in the Central Government. (2) That the reserved subjects shall be foreign affairs (excepting relations with the colonies and the dominions) and relations with Indian Ruling Princes subject to the declaration of rights in resolution No. 4, matters directly affecting the peace, tranquility and the defence of the country. (3) The allotments required for reserved subjects should be the first charge on the revenues. (4) The procedure

for the adoption of the budget should be on the lines laid down for the provinces. (5) All legislation shall be by bills introduced into the Legislative Assembly provided that if, in the case of reserved subjects, the legislative council does not pass such measures as the Government may deem necessary, the Governor-General in Council may provide for the same by regulations, such regulations to be in force for one year, but not to be renewed unless 40 per cent. of the members of the Assembly present and voting are in favour of them. (6) There shall be no Council of State but, if the Council of State is to be constituted, at least half of its total strength shall consist of elected members, and that procedure by certification shall be confined to the reserved subjects. (7) At least half the number of Executive councillors (if there be more than one) in charge of reserved subjects should be Indians. (8) The number of members of the legislative assembly should be raised to 150, and the proportion of the elected members should be four-fifths. (9) The President and the vice-president of the legislative assembly should be elected by the assembly. (10) The legislative assembly should have power to make, or modify, its own rules of business, and they shall not require the sanction of the Governor General. (11) There should be an obligation to convene meetings of the Council and Assembly at stated intervals, or on the requisition of a certain proportion of members. (12) A statutory guarantee should be given that full responsible government should be established in the whole of British India within a period not exceeding 15 years.

Provincial Government.—(1) There should be no additional members of the Executive Government without portfolios. (2) From the commencement of the reformed councils, the relations of the Governor to the ministers in regard to the transferred subjects should be the same as that obtaining in the self-governing dominions. (3) The status and salary of the ministers shall be the same as that of the members of the Executive Council. (4) At least half the number of Executive Councillors in charge of reserved subjects (if there be more than one) should be Indians. (5) The Budget shall be under the control of the Legislature subject to the contribution to the Government of India, and to the allotments required for the reserved subjects.

Legislature.—1. While holding that the people are ripe for the introduction of full provincial autonomy the Congress is yet prepared with a view to facilitating the passage of the reforms, and to save the time which would otherwise be lost in controversy, to leave the departments of Law, Police and Justice (prisons excepted) in the hands of the Executive Government in all Provinces for a period of six years. Executive and Judicial Departments must be separated at once. 2. The president and the vice-president should be elected by the Council. 8, That the proposal to institute a grand committee shall be dropped. The Provincial Legislative Council shall legislate in respect of all matters within the jurisdiction of Provincial Government, including Law, Justice and Police, but where the Government is not satisfied with the decision of the Legislative Council in respect of matters relating to Law, Justice and Police, it shall be open to the Government to refer the matter to the Government of India. The Government of India may refer the matter to the Indian Legislature, and the ordinary procedure shall follow. But if grand committees are instituted, this Congress is of opinion that not less than one-half of the strength shall be elected by the Legislative Assembly. 4. The proportion of elected members in the Legislative Council shall be four-fifths.

Elections.—5. Whenever the Legislative Assembly, the Council of State, or the Legislative Council is dissolved it shall be obligatory on the Governor-General or the Governor as the case may be, to order the necessary elections, and to re-summon the body dissolved within a period of three months from the date of dissolution. (*b*) The Council of India shall be abolished, and there shall be two permanent under-secretaries to assist the Secretary of State for India, one of whom shall be an Indian. (*c*) All changes in respect to the India office establishment shall be placed on the British estimates. (*d*) No financial or administrative powers in regard to reserved subjects should be transferred to the Provincial Governments until such time as they are made responsible in regard to electorates, and until then the control of Parliament and the Secretary of State should continue. (*e*) The committee to be appointed to examine and report on the present constitution of the Council of India shall contain an adequate Indian element. That there shall be no Privy Council instituted for India."

Mrs. Sarojini Naidu moved: "Women possessing the same qualifications as are laid down for man in any part of the scheme shall not be disqualified on account of sex."

The following resolutions were then passed :—

(1) That this Congress is of opinion that the proportion of annual recruitment to the Indian Civil Service to be made in India should be 50 per cent. to start with, such recruitment to be by open competition in India and by selection from persons already appointed to the Provincial Civil Service.

(2) This Congress places on record its deep disappointment at the altogether inadequate response made by the Government to the demand for the grant of commissions to Indians in the army and is of opinion that steps should be immediately taken so as to enable the grant to Indians at an early date of at least 25 per cent. of the commissions in the army, the proportion to be increased to 50 per cent. within a period of ten years.

(3) The proportion of Mahomedans in the Legislative Councils and the Legislative Assembly as laid down in the Congress League scheme must be maintained.

(4) That the question of provincial contributions to the Imperial Exchequer be referred to the Provincial Congress committees for opinions to be placed before the next Congress at Delhi.

(5) That as regards the committee to advise on the question of the separation of Indian from Provincial functions and also with regard

) the committee, if any, for the consideration reserved and unreserved departments, this ongress is of opinion that the principle set eth in the above resolution should apply *utatis mutandis* to the formation of the said mmittee.

(6) That, so far as the question of determining e franchise and the constituencies and the mposition of the Legislative Assemblies is oncerned, this Congress is of opinion that, inead of being left to be dealt with by comittees, it should be decided by the House of ommons and be incorporated in the statute to framed for the constitution of the Indian overnment.

(7) This Congress condemns the recommendation of the Rowlatt Committee which if given effect to will interfere with the fundamental rights of the Indian people and impede the healthy growth of public opinion.

(8) That the President of the Special Congress, the President of the Congress for the year and the Hon. Mr. G. M. Bhurgri, Dewan Baha dur P. Kesava Pillai and Mr. C. P. Ramaswami Ayar, the General Secretaries of the Congress be constituted a committee of selection for the purpose of selecting the members of the Congress deputation to proceed to England to press the Congress views on the British democracy.

MOSLEM LEAGUE RESOLUTIONS.

The first resolution proposed by the President the Moslem League ran as follows :—The l-India Muslim League tenders its most loyal mage to His Majesty the King-Emperor and sures the Government of the steadfast and ntinued loyalty of the Muslim community India throughout the present crisis.

The President next proposed :—The All-India-slim League reaffirms the principles of re-m contained in the resolutions relating to f-government adopted in their annual sessions Lucknow and Calcutta and declares that the nt of self-government within the empire is ential to strengthen the bond between England l India and also to satisfy the legitimate pirations of the Indian people.

The following resolutions were also placed m the chair and carried unanimously.

The All-India Muslim League enters an emtic protest against the insinuation contained the Report on Indian Constitutional Reform t the people of India are unfit for responve government.

The All-India Muslim League deeply deplores absence of some of the trusted leaders of community from this Special Sessions of the gue and once again puts on record its restful but firm protest against their continued ure ration in spite of the repeated prayers of community for their release.

The All-India Muslim League once again emises the importance of making due provis for an adequate and separate representa- of the Mussalmans on all self-governing itutions which will be constituted on the in-uration of the proposed constitutional rms.

That the All-India Muslim League is of nion that it is essential for the welfare of the ian people that the Indian Legislature should e the same freedom in fiscal matters as are yed by the self-governing dominions of the pire.

odifications Suggested.—The Honourable l Vazir Hasan moved the following resolu-s :—The All-India Muslim League affirms the introduction of a system of Responsible ernment should proceed simultaneously in Central as well as the Provincial Governts. The All-India Muslim League while welcoming the Report on Indian Constitutional Reforms as an earnest attempt to liberalize Indian political institutions and recognising that some of the proposals constituted an advance on the present conditions in some directions, is of opinion that the recommendations as a whole are unsatisfactory and regrets that the scheme fails to appreciate the peculiar position of the Mussalmans of India and evinces a want of sympathy with their interests.

The League is further of opinion that the following modification and changes in the proposals are necessary to render the scheme of reforms a substantial step towards Responsible Government. The proportion of the Mussalman in the Assembly and the Legislative Councils as laid down in the Congress League Scheme must be maintained. The measure of control that Parliament and Secretary of State exercise over Indian affairs should be relaxed as subjects are transferred to popular control, from time to time, and in the case of reserved subjects, the general and financial control of Parliament and the Secretary of State should not be substituted by the control of the Government of India as long as the Government of India is not made fully responsible to the people. The Council of India should be abolished and the Secretary of State should be assisted by two under-secretaries, one of whom should always be an Indian. The establishment charges of the India Office should be placed on the British estimates. The Committee to be appointed to examine and report on the present constitution of the Council of India should contain an adequate Indian element. The words "Good Government" in recommendation 5 of the Report should be either clearly defined or deleted. There should be no Privy Council for India. The Indian element in the Executive Council of the Governor General should not be less than half of the total number of members. In making such appointments the claims of the Mussalmans should be borne in mind.

Power may be taken for the appointment of Under-Secretaries but the majority of these should be appointed from amongst the elected members of the Legislative Assembly. The total strength of the Legislative Assembly should be 150, of whom four-fifths should be elected. The President and Vice-President of the Legislative Assembly should be elected by the Assembly.

The Council of State may be retained provided that a system of reserved and transferred subjects similar to that proposed for the Provinces is adopted for the Central Government and that in the legislature of India the certificate of the Governor-General-in-Council should not apply except to certain reserved subjects hereinafter mentioned. The Reserved Subjects should be confined to the Army, the Navy, Foreign and Political relations between the Government of India and other powers excepting relations with the Colonies and Dominions, including the declaration of war and entering into treaties and matters directly affecting the peace, tranquility and safety of the country.

Governor General's Powers.—In the Council of State half the members shall be elected, one-third of the elected members being Mussalmans to be elected by Muslim constituencies.

The certificate of the Governor-General should not apply to matters other than reserved subjects and only in cases directly affecting the peace, tranquility and safety of the country. If the Governor-General dissolves the Legislative Assembly he shall summon a fresh Assembly within three months of such dissolution.

The Governor-General-in-Council and not the Governor-General alone should have the power to pass ordinances. The Budget in the Legislative Assembly should follow the same procedure as the Provincial Budget *mutatis mutandis* Reserved Subjects to include only Law, Justice and Police, (except prisons) and there should be a complete separation of Judicial and Executive functions at once.

The status and salary of the Ministers shall be the same as that of the members of the Executive Council.

Complete **Provincial autonomy** be assured by terms of the statute within six years. No additional members shall be appointed without portfolios. The League disagrees with the recommendation that additional member or members, may be appointed to the Provincial Executive Councils by the Governor from among his senior officials for purposes of consultation and advice only. The Governor shall not have power to summon either part of his council separately. Power may be taken to appoint under-secretaries provided that the under-secretaries so appointed shall be from among the elected members of the Legislative Council. The Legislative Council shall consist of four fifths elected and one-fifth nominated members The Legislative Council shall elect its own President and Vice-President. The re-transfe of transferred subjects to the list of reserve subjects in case of mal-administration shal only take place with the sanction of the Parlia ment. The Legislative Council shall have th right to vote the salary of ministers five year after the first Council.

The status of Ajmer-Merwara and Delh should be that of a Regular Province and tha popular government and effective control in th affairs of the local government should be grante to their people.

The percentages of recruitment in India of th public services, including the Indian Civ Service, should begin with 50 per cent. an increases by 1½ per cent. annually until th position is reviewed by the Commission. Th League objects to the time scale of promotio set out in recommendation No. 68 of the Repor All persons either recruited in England or Ind should receive equal pay. No allowances to l granted to persons recruited in Europe for se vice in India or to those recruited in India f service in Europe.

The All-India Muslim League authorises t Council of the League to take steps to send deputation to England at an early date to wo conjointly with the Congress deputation in t matter of reforms in accordance with the pri ciples incorporated in the resolutions pass in this special session of the All-India Musli League and to secure for the Mussalmans India due recognition of their rights for enabli them to take their proper place in the reform political constitution of the country.

The All-India Muslim League while genera condemning the conclusions arrived at by t **Rowlatt Committee,** records its emph protest against the aspersions cast in the rep on the loyalty of the Mussalman commun and having regard to the method of investigati adopted, declares its conviction that the conc sions arrived at by the committee regardi the existence of a seditious movement in t community are not correct. The Lea further emphatically declares that it cannot cept the remarks of the said committee regard some of the respected leaders of the commun unless and until the materials on which committee profess to base their conclus are tested in a court of law.

MODERATE CONFERENCE RESOLUTIONS.

The following resolutions were passed at the Special Moderate Conference held in Bombay in November :—

"This Conference offers its loyal homage to the throne and person of His Majesty the King Emperor, and expresses its gratification at the announcement by His Majesty of the intended visit of His Royal Highness the Prince of Wales to India, where the Conference is confident, a warm and enthusiastic welcome assuredly await him."

"This Conference rejoices at the decisively hopeful turn which the great war has taken in favour of Great Britain and her gallant Allies and fervently hopes that the war soon end in the complete triumph of the id for which the Allied Powers were compelle unsheath their sword, and expresses its de mination to ensure that until the final vict is won, India will continue to render to Gov ment unstintedly and whole-heartedly whate assistance and service she can in the succes prosecution of the war."

Rao Bahadur R. N. Mudholkar, of Amr moved:—"This Conference cordially **welco the reform proposals** of the Secretary State and the Viceroy of India as constitu

a distinct advance on present conditions both as regards the Government of India and the Provincial Governments and also a real and substantial step towards the progressive realisation of "responsible government" in the Provincial Governments in due fulfilment of the terms of the announcement of August 20, 1917. As such this Conference accords its hearty support to those proposals and, while suggesting necessary modifications and improvements therein, expresses its grateful appreciation of the earnest effort of Mr. Montagu and Lord Chelmsford to start the country on a career of genuine and lasting progress towards the promised goal.

Sir Hormusji A. Wadya moved:—"This Conference regards all attempts at the condemnation or rejection of the reform scheme as a whole as ill-advised and, in particular protests emphatically against the reactionary attitude assumed towards it by the Indo-British Association and some European public bodies in this country which is certain to produce, if successfully persisted in, an extremely undesirable state of feeling between England and India and imperil the cause of ordered progress in this country. This Conference, therefore, most earnestly urges His Majesty's Government and Parliament of the United Kingdom to give effect to the provisions of the scheme and the suggestions of its supporters in regard thereto as early as possible by suitable legislation."

The Government of India.—The Hon. Mr. C. Y. Chintamani moved:—"(*a*) This Conference, while making due allowance for the necessities or drawbacks of a transitional scheme, urges that having regard to the terms of the announcement of August 20, 1917, and in order that the progress of India towards the goal of a self-governing unit of the British Empire may be facilitated and not unduly delayed or hampered, as also with a view to avoid the untoward consequences of a legislature containing a substantially elected popular element being allowed merely to indulge in criticism unchecked by responsibility, it is essential that the principle of "responsible government" should be introduced also in the Government of India, simultaneously with a similar form in the Provinces. There should therefore, be a division of functions in the Central Government into 'reserved' and transferred' as a part of the present instalment of reforms and the Committee on division of functions should be instructed to investigate the subjects and make recommendations. (*b*) While, as suggested above, some measure of transfer of power to the Indian Legislature should be introduced at the commencement, provision should be made for future progress towards complete responsible government of the Government of India by specifically authorising the proposed periodic Commissions to inquire into the matter and to recommend to Parliament such further advance as may be deemed necessary or desirable in that behalf. (*c*) This Conference recommends that the composition of the Council of State should be so altered as to ensure that one-half of its total strength shall consist of elected members. (*d*) This Conference urges that legislation of an exceptional character having the effect of curtailing ordinary rights such as the freedom of the press and public meetings and open judicial trial, should not be carried through the Council of State alone, or in spite of the declared opinion of the Legislative Assembly of India, except in a time of war or internal disturbance, without the approval of the Select Committee of the House of Commons proposed to be set up under the scheme, unless such legislation is of a temporary character and limited to a period of one year only the said legislation being in any case made renewable without such approval in the last resort. (*e*) The power of certification given to the Governor-General should be limited to matters involving the defence of the country, foreign and political relations, and peace and order and should not be extended to "good government" generally or 'sound financial administration." (*f*) The Indian element in the Executive Government of India should be one-half of the total number of members of that Government.

The Hon. Sir Fazulbhoy Currimbhoy moved: "Saving such equal and equitable Imperial obligations as may be agreed upon as resting on all parts of the Empire, the Government of India, acting under the control of the Legislature, should enjoy the same power of regulating **the fiscal policy of India** as the Governments of the self-governing Dominions enjoy of regulating their fiscal policy."

Provincial Reforms.—The Hon. Mr. V. S. Shrinivas Sastri:—"(1) (*a*) The status and emoluments of ministers should be identical with those of executive councillors, and the Governor should not have greater power of control over them than over the latter. (*b*) Whatever power may be given to the Governor-in-Council to interfere with the decisions of the Governor and ministers on the ground of their possible effects on the administration of the reserved subjects, corresponding power should be given to the Governor and ministers in respect of decisions of the Governor-in-Council affecting directly or indirectly the administration of the transferred subjects. (*c*) The proposal to appoint an additional member or members, from among the senior officials, without portfolios and without vote, for purposes of consultation and advice only, but as members of the executive government in the provinces should be dropped. (*d*) Heads of Provincial Governments in the major Provinces should ordinarily be selected from the ranks of public men in the United Kingdom. (*e*) No administrative control over subjects vested in Provincial Governments should be "reserved" in the Central Government, particularly in respect of "transferred" heads. (*f*) The Government of India should have no power to make a supplementary levy upon the province: they may only take loans from the latter on occasions of emergency. (2) This Conference recommends that the largest possible number of subjects should be included in the "transferred" list in every province as the progress and conditions of each province may justify and that none mentioned in the illustrative list No. II appended to the report should, as far as possible, be "reserved" in any province."

Prof. H. G. Limaye, of Poona, moved:—(*a*) "**The Franchise** should be as wide and the composition of the Legislative Council should

be as liberal as circumstances may admit in each Province, the number of representatives of the general territorial electorates being fixed in every case at not less than one-half of the whole Council. (*b*) The elected element in the Provincial Legislative Councils should be four-fifths of the total strength of the Councils at least in the more advanced Provinces. (*c*) The Franchise should be so broad and the electorates so devised as to secure to all classes of tax-payers their due representation by election, and the interests of those communities in Madras and Bombay, Deccan and elsewhere who at present demand special electoral protection should be adequately safeguarded by introducing a system of plural constituencies in which a reasonable number of seats should be reserved for those communities till the first Parliamentary enquiry. (*d*) Mahomedan representation in every legislature should be in the proportions mentioned in the scheme adopted by the Congress and the Muslim League at Lucknow in 1916. (*e*) In the case of any community, for which separate special electorates may be deemed at present necessary, participation in the general territorial electorates whether as voters or candidates, should not be permitted. (*f*) It shall be left to the option of an individual belonging to a community which is given separate representation to enrol himself as a voter either in the general or the communal electorate."

Other Proposals.—The Hon'ble Mr. B. S. Kamat, of Poona, moved :—

I (*a*) It should be provided that when a Council is dissolved by the Governor, a fresh election should be held and the new Council summoned not later than four months after the dissolution. (*b*) Some provision should be made for the appointment and co-option of qualified Indians on the periodic Commissions proposed to be appointed every ten or twelve years and it should further be provided that the first periodic Commission shall come to India and submit its recommendations to Parliament before the expiry of the third Legislative Council after the Reform Scheme comes into operation and that every subsequent periodic Commission should be appointed at the end of every ten years. (*c*) The Legislative Councils should have the right to elect their own Presidents and Vice-Presidents. II (*a*) This Conference thanks the Secretary of State and the Viceroy for recommending that all racial bars should be abolished and for recognising the principle of recruitment of all the Indian public services in India and in England instead of any service being recruited for exclusively in the latter country. (*b*) This Conference strongly urges that Indians should be nominated to 20 per cent., to start with, of King's commissions in the Indian Army and (2) that adequate provision for training them should be made in this country itself. (*c*) All racial inequalities in respect of trial by jury, the rules made under the Arms Act, etc. should be removed, and the latter should be so amended as to provide for the possession and carrying of Arms by Indians under liberal conditions. (*d*) A complete separation of judicial and executive functions of all District Officers should be made at least in all major Provinces, at once and the judiciary placed under the jurisdiction of the highest court of the Province.

The following resolution was put from the chair :—"This Conference, while generally approving of the proposals embodied in the Report regarding the India Office and Parliamentary control, urges (*a*) That the **administrative Control of Parliament** over the Government of India exercised through the Secretary of State should continue except in so far as the control of the legislature on the spot is substituted for the present Parliamentary control. (*b*) That Indian opinion should be represented on the Committee appointed to report upon the organisation of the India Office and the evidence of Indian witnesses invited. (*c*) That at least a major part of the cost of the India Office should be borne by the British Exchequer. (*d*) That until the India Council can be abolished by substituting Indian control for the control of Parliament over the affairs of India, it should be a mere advisory body with its strength reduced to 8 members, four of whom should be Indians."

Deputation to England.—Mr. N. M. Samarth moved the eleventh and last resolution as follows :—"(*a*) This Conference appoints a Committee consisting of the following gentlemen, with power to add to their number to select a deputation to proceed to England at a time to be determined by the Committee in consultation with the British Committee of the Indian National Congress, to urge on British statesmen, members of both Houses of Parliament, political associations, the press and the British public generally, the wisdom and necessity of supporting the Montagu-Chelmsford reform scheme and giving legislative effect to it at an early date with such modifications and improvements as have been formulated or suggested in the foregoing resolutions. (*b*) The said Committee, with power to add to their number, should also take steps to form a properly constituted permanent organisation of the party with branches in the various Provinces, with a view (1) to do sustained work for the political progress and the moral and material welfare of the people, (2) to give combined expression from time to time to the considered opinion of the party on matters of public interest and (3) to inform and educate public opinion in this country in support of its views, methods and policy." Committee :—The Hon. Mr. Surendra Nath Bannerjea, Chairman ; the Hon. Sir Dinsha Edulji Wacha, Vice-Chairman ; Sir N. G. Chandavarkar, Vice-Chairman, Sir Rajendra Nath Mookerjee ; Sir P. S. Sivaswamy Aiyer ; Sir Binode Chunder Mitter ; the Hon. Sir Fazulbhoy Currimbhoy ; Sir Bipin Krishna Bose ; Sir Gangadharrao M. Chitnavis ; Sir H. A. Wadva ; Rao Bahadur R. N. Mudholkar ; the Hon. Mr. M. V. Joshi ; the Hon. Mr. Mian Muhammed Shafi ; the Hon. Pandit Jagat Narayan ; the Hon. Syed Altaf Ali ; the Hon. Mr. V. S. Shrinivasa Sastri ; the Hon. Dr. Tej Bahadur Sapru ; the Hon. M. Provash Chandra Mittra ; Dr. Surahwardy ; the Hon. Rai Bahadur Krishna Sahay ; Dewan Bahadur C. Karunakara Menon ; Mr. C. H. Setalvad ; Dr. Manchar Lal of Lahore ; the Hon. Mr. R. P. Paranjpye ; Babu Satyanand Bose ; Babu Prithwis Chandra Ray ; Mr. D. C. Ghose ; and Mr. V. R. Kothari ; Mr. N. M. Samarth, and the Hon. Mr. C. Y. Chintamani, Secretaries.

The Indian National Congress.

The following record of the early work of the Congress is written by the Hon. Sir Dinshah Wacha :—The Congress was practically founded in 1885 by the late Mr. Allar Octavian Hume, a retired member of the Indian Civil Service, and the son of the distinguished Joseph Hume, M.P., whose radicalism is so well known and who was one of the chief advocates of Retrenchment and Reform in the House of Commons in the forties or fifties. Mr. Hume had a distinguished career in the service. In his younger days when Collector and Magistrate at Etawah, he had rendered invaluable service in quelling the Mutiny in its incipient stage. For this service he was created a Civil Companion of the Bath, a rare honour in those days for a young Anglo-Indian Civil Servant. He retired from the service in 1883 after having honourably filled several high offices, the last of which was the Home Secretaryship of the Government of India. The policy of Lord Lytton's Government (1876-80) had aroused discontent in the country. The imposition of the Vernacular Press Act, commonly known as the Black Act, and the uncalled for hostilities with the Amir Shere Ali of Afghanistan which culminated in the Second Afghan War were the subject of much adverse criticism among the most moderate but enlightened Indians in all parts of the country. It was recognised in all quarters that the people should organise themselves by way of a conference to ventilate their grievances. Correspondence was passing among the Indian leaders of thought in the different provinces as to the formation of such a conference on a sound and permanent footing. The viceroyalty of Lord Ripon (1880-84) gave the necessary stimulus and encouragement. Thus by 1883, when Mr. Hume retired, the idea of the Conference had so far taken body and form that, with the sympathetic support of Mr. Hume, a Union was established after he had in 1883 the genuine support of many sterling friends of India in Parliament, especially John Bright and Mr. Stagg. Mr. Hume had been a silent but watchful observer of events and felt that he must give his active support to the movement, his heart being fully prepared to ameliorate the social, economical and political condition of the Indians. He was in close communication with the leaders in various provinces. Here it may also be worth while recording the fact that during the preliminary stage of the inception of the Congress, Mr. Hume, who had retired to Simla, had had the opportunity of consulting Lord Dufferin on the subject and it is a fact that His Lordship was at one with the object and greatly encouraged Mr. Hume in his mission. Subsequently after 1888 His Lordship, for reasons of his own, which have never been authoritatively declared, chose to assume a hostile attitude towards the organisation but it was effectually met by the speech which Mr. George Yule made in December 1888 at the Congress of Allahabad.

First Session.

Progress was so far made as to formulate the programme of a first meeting in Poona which at the time was the seat of great political activity. The Christmas week of 1885 was resolved upon for the inauguration of the Conference. Unfortunately, when the preparations were being made cholera broke out in the City of Poona and it was deemed unsafe to invite delegates there. Accordingly the seat of the first assembly was hurriedly transferred to Bombay under the auspices of the Bombay Presidency Association, with its then active honorary secretaries, Messrs. Pherozeshah M. Mehta, Kashinath Trimbuk Telang and Dinsha Edulji Wacha. It was at the same time resolved to christen it. "The Indian National Congress," having regard to the fact that its principal aim was faithfully to echo the public opinion of all India. So many misleading statements were made during the earliest years of the Congress as to its aims and objects that it may be useful to relate what they are as laid down by Mr. Hume himself in a speech he made at Allahabad in 1888, on the eve of the session of the Fourth Congress at that centre. Firstly, he prefaced his enumeration of the objects by stating that "no movement in modern historical times has ever acquired, in so short a period, such an appreciable hold on the minds of India, none has ever promised such wide reaching and beneficent results." Further on, it was observed that "the Congress movement is only one outcome, though at the moment the most prominent and tangible, of the labours of a body of cultured men, mostly born natives of India, who some years ago banded themselves together to labour silently for the good of India." As to the fundamental principles of the Congress they are :—

Firstly, the fusion into one national whole of all the different and discordant elements that constitute the population of India ;

Secondly, the gradual regeneration along all lines, mental, moral, social and political of the nation thus evolved ; and,

Thirdly, the consolidation of union between England and India by securing the modification of such of the conditions as may be unjust or injurious to the latter country.

The Split.

It was on the fundamental principles above stated that the Congress carried out its appointed work midst much misrepresentation, obloquy and even abuse, till 1907 when an extreme faction of delegates deliberately chose to raise a split in the united camp. At the Congress held in Surat in that year the session had to be abandoned owing to the violent outbreak of the factional spirit of those who since have been known as "Extremists," in contrast with the overwhelming majority of those entertaining sober views who are called "Moderates ;" but if the proceedings were for the time abandoned, it was not without the leading men immediately organising themselves on the spot to take ways and means for the holding of future congresses and for the purpose of framing a written constitution of which the most important part was the creed of the Congress. In other words, the unwritten aims and objects of the Congress were reduced to writing in a crystallised form As such it may be repeated here, as it should dispel all doubts, misgivings or misunderstandings of the true aims and objects of the Congress,

"The objects of the Indian National Congress are the attainment by the people of India of a system of Government similar to that enjoyed by the self-governing members of the British Empire, and a participation by them in the rights and responsibilities of the Empire on equal terms with those members. These objects are to be achieved by constitutional means by bringing about a steady reform of the existing system of administration and by promoting national unity, fostering public spirit and developing and organising the intellectual, moral, economic and industrial resources of the country."

Every delegate to the National Congress is obliged by the Congress Committee of the province from which he is sent to express in writing his acceptances of the above creed and his willingness to abide by the Constitution and the rules framed under it.

This Constitution has been in full working order since 1908. It is unalterable save by a Resolution of a majority in Congress assembled. It provides a guiding or directing staff of chosen leaders selected by each province and annually confirmed from the platform of the Congress by the President, Ex-Presidents, Secretaries and other office-bearers are nominated *ex-officio* members and the whole Committee is known by the name of the All India Congress Committee. The provinces are the same as the territorial divisions of the Government of India. The Committee of each Province is called the Provincial Congress Committee on whom devolves the duty, under the constitution and the rules, of calling meetings for the election of delegates, suggesting subjects to be brought forward for the consideration of the Congress and all cognate matters. The Congress declares each year at the close of the session where the next Congress is to be held. The town or city where it is to be held begins to make all preparations fully six months before the date of the holding of the session which has hitherto invariably been during the three days immediately succeeding Christmas Day. That period is specially selected owing to the great convenience it affords to all classes of delegates in the country to attend—a convenience not offered at any other time during a year. A Reception Committee is formed with a leading person as its Chairman. That Committee divides its work among various sub-committees such as finance, correspondence, housing, feeding and so on. A band of active young persons volunteer to serve the different sub-committees. Formerly they were chiefly selected from among the student class but owing to the orders of Government in the Education Department, that students should take no active part in politics, volunteers are now wholly recruited from the circle of men of business or profession. Apart from the delegates who generally number from 500 as a minimum to 1,000 or so as a maximum there is always a large number of visitors. So that the pendal is erected to contain at least 5,000 seats. There have been some notable Congresses when the number seated has come to as many as 10,000. That was the number which congregated in Bombay in 1889 when Sir William Wedderburn presided and was accompanied from London by the late Mr. Charles Bradlaugh who afterwards introduced the first Reform Bill of the expanded Legislative Councils in Parliament in 1890. Delegates had had to pay a fee of Rs. 20 for attendance up till 1912, but the fee has since been reduced to Rs. 15. They are charged a very moderate fee for the days they are lodged and boarded. Some well-to-do delegates hire bungalows at their own expense, but the majority of delegates outside those of the province where a Congress is held, generally accept Congress accommodation which in smaller towns becomes a very serious and uphill task indeed.

British Committee.

It may be observed in conclusion that the Congress has an organisation also in London which is called the British Committee of the Congress. It is furnished with funds provided by the Indian National Congress. It has an establishment of its own and attached to it, though with independent income, an organ of opinion, called "India", which echoes the salient events of what may have happened every week in India. As such it performs useful service. It is well informed and is liberally circulated among members of Parliament who sympathise with Indian aspirations or take interest in the general progress and welfare of India. The Committee consists of retired Anglo-Indians and was for years presided over by that well-wisher and disinterested friend of India, Sir William Wedderburn, (d. 1918) who was twice elected President of the Congress. The Committee invariably invites distinguished or leading Indians when in London to take part in its deliberations. The Committee itself is in constant touch with all proceedings in the House of Commons on Indian affairs and often helps members to put questions when needed. Some years ago it formed a standing committee of members of the House of Commons and an attempt is about to be made to revive it. The Committee also keeps itself in communication with the India Office and often acts as a vehicle of conveying Indian opinion to the Secretary of State. As such the organisation renders valuable service to Indian cause in England.

The Congress Re-United.

For some years following 1907 efforts were made to heal the split and these were without avail until 1916 when a re-united Congress met at Lucknow under the presidency of Babu Ambica Charan Muzumdar of Faridpur in Bengal.

The Reforms.

The attitude of the Indian National Congress towards the Montagu-Chelmsford Scheme is fully summarised in the section Constitutional Reform in India (*q.v.*). What is commonly known as the joint scheme of the Indian National Congress and the Moslem League which is discussed in the Montagu-Chelmsford Report will be found set out in the Indian Year Book for 1918, pp. 659, 660, 661, 662, 663, 664 and 665. As is shown in the section on Constitutional Reform the effect of this Scheme was to sever the nominal unanimity between the Moderate and the Extreme Wings. The Congress went over entirely to the Extreme Wing and the Moderate Party is now setting up its own organisation.

(*See also page* 648.)

The Moslem League.

The Indian Moslem League was established in 1906. Prior to that time the Indian Moslems had stood aloof from politics. Acting under the guidance of the greatest man they have produced, **Sir Syed Ahmad**, they devoted their attention to education, founding the Aligarh College with the special purpose of making up the leeway of Mahomedans in education, and left politics to the other Indian peoples. A few Mahomedans joined the National Congress and took part in its annual sessions; but the community as a whole stood aside from political movements.

In 1906 however changes occurred which impelled Indian Moslems to action. Under the Act of 1892, constituting the Indian Legislative Councils, there was no specific Moslem representation and in the elections which had taken place under that Act the Moslems had for all practical purposes failed to find selection. Therefore, when the amendment of the Act and the extension of the representative principle were under discussion, they were stirred to action. They feared lest, under an academic system, adapted only to a homogeneous people, their distinct communal interests would either secure no representation at all, or only inadequate representation. They therefore took counsel together and approached the Viceroy in deputation, headed by His Highness the Aga Khan, and presented their views in an important State paper. In this they laid stress on their position in the following passage:—

"Representative institutions of the European type are new to the Indian people—many of the most thoughtful members of our community, in fact, consider that the greatest care, forethought, and caution will be necessary if they are to be successfully adapted to the social, religious and political conditions obtaining in India—and that in the absence of such care and caution their adoption is likely, amongst other evils, to place our national interests at the disposal of an unsympathetic majority."

Feeling that the Mahomedans were a distinct community, and that their interests had suffered because they had been under-represented, the deputation asked for representation on a communal basis, and for representation in excess of their actual numerical strength on account of the peculiar and historical position of the Moslem community. This request was accepted, and the Imperial and Provincial Councils embodied the principle of Mahomedan representation on a communal basis.

First Constitution.

It was felt that in view of the changed conditions the Moslems should organise their own political society for the expression of their communal policy. This was the origin of the Moslem League. The rules and regulations of the League provided for a constitution, with provincial branches, and defined the objects of the League in the following language:—

The **objects of the League** shall be—

(*a*) to promote among Indian Mussalmans feelings of loyalty towards the British Government, and to remove any misconception that may arise as to the intentions of Government with regard to any of its measures:

(*b*) to protect the political and other rights and interests of Indian Mussalmans and to place their needs and aspirations before the Government in temperate language:

(*c*) without prejudice to the objects mentioned under (*a*) and (*b*) of this section, to promote so far as possible concord and harmony between the Mussalmans and other communities of India.

Revised Constitution.

In 1912 and 1913 Moslem opinion as expressed by the League underwent a certain change. First at a meeting of the Council, afterwards at the annual session which was held at Lucknow, the constitution was amended so as to include in the objects of the League the attainment of a system of **self-government** in India under the Crown. The objects of the League, as defined in the most recent publication, are thus set forth:—

The objects of the League shall be:—

(*a*) to maintain and promote among the people of this country feelings of loyalty towards the British Crown:

(*b*) to protect and advance the political and other rights and interests of the Indian Mussalmans:

(*c*) to promote friendship and union between the Mussalmans and other communities of India:

(*d*) without detriment to the foregoing objects, attainment, under the ægis of the British Crown, of a system of self-government suitable to India, through constitutional means, by bringing about, amongst others, a steady reform of the existing system of administration, by promoting national unity, by fostering public spirit among the people of India and by co-operating with other communities for the said purposes.

This change in the constitution of the League produced much discussion and was opposed by many of the older men who had led the community.

London Branch.

There is a branch of the Moslem League in London, of which the Right Hon. Syed Amir Ali is President. In the autumn of 1913 the London office bearers resigned, as the result of differences of opinion with two Indian Moslems who were visiting England, Mr. Mahomed Ali and Mr. Vazier Khan, the honorary secretary of the League. Syed Amir Ali thus described the nature of these differences: "an endeavour to capture the organisation here and to impose on it their own will. To both of these attempts I was, in the interests of the Mussalman community, bound to take strong objection." In response to strong pressure from the Provincial Leagues in India, the London office bearers resumed their posts and the London Branch of the League continues under the former personnel.

The headquarters of the League are at Lucknow.

The attitude of the Moslem League towards the Scheme for Indian Constitutional Reform prepared by Lord Chelmsford and Mr. Montagu is indicated in the Section Constitutional Reform in India (*q.v.*). The Moslem League generally endorsed the views expressed by the Extreme Wing and the Indian National Congress. At the Delhi Session in December 1918 certain special questions relating to the future of Turkey figured prominently in the discussion and the following resolutions *inter alia* were passed :—"That the All-India Moslem League enters its strong protest against the occupation of Jerusalem and Najafiashraf by His Majesty's forces and hopes that all such places will be immediately restored. The League further requests His Majesty's Government, in view of the wishes of the Mussalmans of India, to use its good offices to dissuade other Allied Powers from taking any steps which might affect the position and status of their holy places."

"That the All-India Moslem League deems it necessary to remind Government of the declaration of policy made by His Majesty's Government that the question of the Caliphate is one for Moslem opinion alone to decide and begs to point out that any departure from that policy will cause great resentment and ill-feeling among Mussalmans. The League further requests His Majesty's Government to dissuade any Allied Power that might contemplate any interference with the question from taking any action in this matter."

THE CHRISTMAS SESSIONS.

The ordinary Christmas session of the Congress, which was held at Delhi, was dominated by the Extremists of Bengal, Madras and Poona. It generally approved of the resolutions passed at the special Congress, but went further in urging that the country is ripe for provincial responsibility at once. The principal resolutions were as follows :—

"That this Congress also re-affirms the resolution relating to Self-Government passed at the Special Session of the Congress held in Bombay subject to this, that in view of the expression of opinion in the country since the sitting of the said Special Session, this Congress is of opinion that so far as the provinces are concerned full Responsible Government should be granted at once and that no part of British India should be excluded from the benefit of the proposed constitutional reforms."

"That non-official Europeans should not be allowed to form separate electorates on the ground that they represent the mining or the tea industries and if they are allowed such representation they should be limited to their proportion compared to the population of the provinces concerned."

"That this Congress views with grave apprehension the attempt made in certain quarters to assign an inferior position to the Punjab in the Reform Scheme and urges that having regard to its political, military and historical importance its wealth, education, social advancement and its magnificent service during that last war the Punjab should be placed on a basis of equality with Bengal, Madras, Bombay and the United Provinces."

"In view of the pronouncement of President Wilson, Mr. Lloyd George and other British statesmen that to ensure the future peace of the world the principle of Self-Determination should be applied to all progressive nations, be it resolved that this Congress claims the recognition of India by the British Parliament and by the Peace Conference as one progressive nation to whom the principle of Self-Determination should be applied."

"That in the practical application of the principle in India the first step should be the removal of all hindrances to free discussion and therefore the immediate repeal of all laws, regulations and ordinances restricting the free discussion of political questions whether in the press, private or public meetings or otherwise, so that the legitimate aspirations and opinions of all residents in India may be fearlessly expressed."

"Further the abolition of the laws, regulations and ordinances which confer on the Executive the power to arrest, retain, intern, extern or imprision any British subject in India outside the process or ordinary civil or criminal law and the assimilation of the law of sedition to that of England."

"The passing of an Act of Parliament which will establish at an early date complete Responsible Government in India."

"When complete Responsible Government shall be thus established the final authority in all internal affairs shall be the Supreme Legislative Assembly as voicing the will of the Indian nation."

Resolved further, "that in the reconstruction of the Imperial policy, whether in matters affecting the inner relations of the nations constituting it in the question of foreign policy or in the League of Nations India shall be accorded the same position as the self-governing Dominions."

The Moslem League, also meeting at Delhi, passed a resolution on self-determination on the lines of that adopted by the Congress.

The Committees on Franchise and Subjects, foershadowed in the Report, are sitting under the chairmanship of Lord Southborough.

Posts and Telegraphs.

POST OFFICE.

The control of the Posts and Telegraphs of India is vested in an officer designated Director-General of Posts and Telegraphs who works in subordination to the Government of India in the Department of Commerce and Industry. The superior staff of the Direction, in addition to the Director-General himself, consists on the postal side of two Deputy Directors-General (who are officers of the rank of Postmaster-General), four Assistant Directors-General (whose status is similar to that of Deputy Postmasters-General), and two Personal Assistants (who are selected from the staff of Superintendents).

For postal purposes, the Indian Empire is divided into eight circles as shown below, each in charge of a Postmaster-General:—Bengal and Assam, Bihar and Orissa, Bombay, Burma, Central, Madras, Punjab and North-West Frontier, and United Provinces. The Central Circle comprises roughly the Central Provinces and the Central India and Rajputana Agencies.

The Postmasters-General are responsible to the Director-General for the whole of the postal arrangements in their respective circles, with the exception of those connected with the conveyance of mails by railways and inland steamers which are entrusted to three officers bearing the designation of Deputy Post-master-General, Railway Mail Service and Sorting. All the Postmasters-General are provided with Personal Assistants, while those in charge of the largest circles are also assisted by Deputy Postmasters-General. The eight Postal Circles and the jurisdictions of the three Deputy Post-masters-General, Railway Mail Service and Sorting are divided into Divisions each in charge of a Superintendent; and each Superintendent is assisted by a certain number of officials styled Inspectors or Assistant Superintendents.

Generally there is a head post office at the head-quarters of each revenue district and other post offices in the same district are usually subordinate to the head office for purposes of accounts. The Postmasters of the Calcutta, Bombay, and Madras General Post Offices and of the larger of the other head post offices are directly under the Postmaster-General and the least of them exercises the same powers as a Superintendent of Post Offices in respect of inspections, appointments, leave and punishments. The Presidency Postmasters, indeed, have one or more Superintendents subordinate to them. When the duties of the Postmaster of a head office become so onerous that he is unable to perform them fully himself, a Deputy Postmaster is appointed to relieve him of some of them, and if still further relief is required one or more Assistant Postmasters are employed. The more important of the offices subordinate to the head office are designated sub-offices and are usually established only in towns of some importance. Sub-offices transact all classes of postal business with the public, submit accounts to the head offices to which they are subordinate, incorporating therein the accounts of their branch offices, and frequently have direct dealings with Government local sub-treasuries. The officer in charge of such an office works it either single-handed or with the assistance of one or more clerks according to the amount of business.

Branch offices are small offices with limited functions ordinarily intended for villages, and are placed in charge either of departmental officers on small pay or of extraneous agents, such as school-masters, shopkeepers, landholders or cultivators who perform their postal duties in return for a small remuneration.

The audit work of the Post Office is entrusted to the Accountant-General, Posts and Telegraphs, who is an officer of the Finance Department of the Government of India and is not subordinate to the Director-General. The Accountant-General is assisted by Deputy Accountants-General, all of whom, with the necessary staff of clerks, perform at separate headquarters the actual audit work of a certain number of postal circles.

In accordance with an arrangement which has been in force since 1883, a large number of sub-post offices and a few head offices perform telegraph work in addition to their postal work and are known by the name of combined offices. The policy is to increase telegraph facilities everywhere and especially in towns by opening a number of cheap telegraph offices working under the control of the Post Office. The telegraph expenditure on account of these combined offices is borne by the Telegraph Department to which the whole of their telegraph revenue is also credited.

The **Inland Tariff** (which is applicable to Ceylon and Portuguese India except as indicated below) is as follows:—

	When the postage is prepaid.	When the postage is wholly unpaid.	When the postage is insufficiently prepaid.
Letters.	Anna.	Double the pre-paid rate (chargeable on delivery).	Double the deficiency (chargeable on delivery).
Not exceeding 1 tola	½		
Exceeding 1 tola but not exceeding 10 tolas	1		
Every additional 10 tolas or part of that weight	1		
Book and pattern packets.			
Every 10 tolas or part of that weight..	½		

Postcards.

Single .. .. .. ¼ anna.

Reply .. .. .. ½ „

(The postage on cards of private manufacture must be prepaid in full.)

Parcels (prepayment compulsory).

	Rs.	a.
Not exceeding 20 tolas	0	2
Exceeding 20 tolas but not exceeding 800 tolas..	0	4

(for every 40 tolas or fraction thereof).

Registration is compulsory in the case of parcels weighing over 440 tolas.

These rates are not applicable to parcels for Portuguese India.

Registration fee.

	Rs.	a.
For each letter, postcard, book or pattern packet, or parcel to be registered	0	2

Ordinary Money Order fees.

On any sum not exceeding Rs. 5.. ..	0	1
On any sum exceeding Rs. 5 but not exceeding Rs. 10	0	2
On any sum exceeding Rs. 10 but not exceeding Rs. 15	0	3
On any sum exceeding Rs. 15 but not exceeding Rs. 25	0	4
On any sum exceeding Rs. 25 up to Rs. 600	0	4

for each complete sum of Rs. 25, and 4 annas for the remainder; provided that, if the remainder does not exceed Rs. 5, the charge for it shall be only 1 anna; if it does not exceed Rs. 10, the charge for it shall be only 2 annas and if it does not exceed Rs. 15, the charge for it shall be only 3 annas.

Telegraphic money order fees.—The same as the fees for ordinary money orders *plus* a telegraph charge calculated at the rates for inland telegrams for the actual number of words used in the telegram advising the remittance, according as the telegram is to be sent as an "Express" or as an "Ordinary" message.

In the case of Ceylon the telegraph charge is at the rate of Re. 1 for the first 12 words and 2 annas for each additional word. Telegraphic money orders cannot be sent to Portuguese India.

Value-payable fees.—These are calculated on the amount specified for remittance to the sender and are the same as the fees for ordinary money orders.

Insurance fees.—For every Rs. 50 of insured value 1 anna.

As regards Ceylon and Portuguese India see Foreign Tariff.

Acknowledgment fee.—For each registered article 1 anna.

The Foreign Tariff (which is not applicable to Ceylon except in respect of insurance fees or to Portuguese India except in respect of insurance fees and parcel postage) is as follows:—

Letters.

To the United Kingdom, other British Possessions and Egypt, including the Soudan. } 1½ annas for the first ounce and 1 anna for each additional ounce or part of that weight.

To other countries, colonies or places. } 2½ annas for the first ounce and 1½ annas for every additional ounce or part of that weight.

Postcards Single .. .. .. 1 anna.

„ Reply .. .. .. 2 annas.

Printed Papers.—½ anna for every 2 ounces or part of that weight.

Business Papers.—½ anna for every 2 ounces or part of that weight, subject to a minimum charge of 2½ annas for each packet.

Samples.—½ anna for every 2 ounces or part of that weight, subject to a minimum charge of 1 anna for each packet.

(The rates shown above are those chargeable when the postage is prepaid.)

Parcels.—(Prepayment compulsory.) The rates vary with the countries to which they are addressed. The rates to the United Kingdom are—

	Via Gibraltar. Rs.	a.	p.	Overland. Rs.	a.	p.
Not over 3 lbs.	0	12	0	1	8	0
„ „ 7 „	1	8	0	2	4	0
„ „ 11 „	2	4	0	3	0	0

Registration fee.—2 annas for each letter, postcard, or packet.

Money Orders.—To countries on which money orders have to be drawn in rupee currency, the rates of commission are the same as in the case of inland money orders.

To countries on which money orders have to be drawn in sterling, the rates are as follows:—

	Annas.
Not exceeding £ 1	3
Exceeding £1 but not exceeding £2 ..	5
„ £2 „ „ „ £3 ..	8
„ £3 „ „ „ £4 ..	10
„ £4 „ „ „ £5 ..	12
„ £5	12

for each complete sum of £5 and 12 annas for the remainder, provided that if the remainder does not exceed £1, the charge for it shall be 3 annas; if it does not exceed £2, the charge for it shall be 5 annas; if it does not exceed £3, the charge for it shall be 8 annas; and if it does not exceed £4, the charge for it shall be 10 annas.

Insurance fees—

To countries other than those named below .. 3 annas for every £5.

To Ceylon and Portuguese India .. .. 2 annas for every Rs 100.

To Mauritius, the Seychelles, Zanzibar, and the British East Africa, Uganda, and Somaliland Protectorates .. .. 4 annas for every Rs 100.

Acknowledgment fee.—2 annas for each registered article.

Growth of the Post Office.—At the end of 1897-98 the total number of post offices was 11,742 and the total length of mail lines 126,251 miles. For the 31st March 1918 the corresponding figures were 19,410 and 1,57,606. During the year 1897-98, the total number of letters, postcards, newspapers and packets given out for delivery was 460,899,344, while for the year 1917-18 the total number of unregistered articles of the same classes given out for delivery *plus* the number of registered letters and packets posted amounted to 1,099,868,195. The number of parcel mail articles given out for delivery in the former year was 4,119,781 as compared with 14,150,948 such articles posted during the latter year. The total number and value of money orders issued increased from 11,795,041 and Rs. 24,79,45,455 in 1897-98 to 35,189,352 and Rs. 75,70,66,277, respectively, in 1917-18. During the former year the total number of articles insured for transmission by post was 326,645 with an aggregate declared value of Rs. 10,60,62,500 and the corresponding figures for 1910-11 were 1,169,428 and Rs. 26,88,78,925. As the result, however, mainly of the introduction in 1911-12 of the rule under which inland articles containing currency notes or portions thereof must be insured, the figures for 1917-18 stand at 3,606,045 and 89,42,40,697. The number of accounts open on the books of the Post Office Savings Bank grew from 730,387 on the 31st March 1898 to 1,637,600 at the end of 1917-18, with an increase from Rs. 9,28,72,978 to Rs. 16,58,46,470 in the total amount standing at the credit of depositors. The total staff on the 31st March 1918 numbered 97,364. The net financial result of the working of the Post Office for the year 1917-18 was a surplus of Rs. 46,51,397.

This account of the activities of the Post Office would not be complete if it were not mentioned that on the 31st March 1918 there were 27,103 active Postal Life Insurance policies with an aggregate assurance of Rs. 3,81,76,704 and that during 1917-18 it disbursed a sum of Rs. 53,31,750 to Indian Military pensioners; sold over 10 crores of cash certificates to the public; collected at its own expense a sum of Rs. 23,43,339 on account of customs duty on parcels and letters from abroad; and sold 17,307 lbs. of quinine to the public.

TELEGRAPH DEPARTMENT.

Telegraphs.—Up to 1912 the telegraph system in India was administered as a separate department by an officer designated Director-General of Telegraphs who worked in subordination to the Government of India in the Department of Commerce and Industry. In that year it was decided to vest the control of Posts and Telegraphs in a single officer as an experimental measure with a view to the eventual amalgamation of the two Departments.

In pursuance of this policy an experimental amalgamation of the two services was introduced in the Bombay and Central Circles from the 1st July 1912. The fundamental principles of this scheme which followed closely the system in force in the United Kingdom and several other European countries were that the traffic and engineering work of the Telegraph Department should be separated, the former branch of work in each Circle being transferred to the Postmaster-General assisted by a Deputy Postmaster-General and a suitable number of attached officers and the engineering branch being controlled by a Director of Telegraphs in charge of the two Circles. Subordinate to this officer there were several Divisional Superintendents who were assisted by a number of attached officers.

In 1914 the complete amalgamation of the two Departments was sanctioned by the Secretary of State and introduced from 1st April. The superior staff of the Direction, in addition to the Director-General himself, consists on the engineering side of a Chief Engineer, Telegraphs, with an Assistant, and a Personal Assistant to the Director-General. For traffic work there are a Deputy Director-General, with an Assistant and an Assistant Director-General. In the Circles the scheme which has been introduced follows closely on the lines of the experimental one referred to above. For telegraph engineering purposes India is divided up into three Circles, each in charge of a Director of Telegraphs. For Burma special arrangements were considered necessary and the engineering work is in charge of the Post Master-General who is a Telegraph officer specially selected for the purpose. These four Circles are divided into twenty Divisions each of which is in charge of a Superintendent of Telegraph Engineering.

The telegraph traffic work is under the control of the Postmasters-General, each of whom is assisted by a Deputy Postmaster-General and a suitable staff of attached officers.

The audit work of the Telegraph Department is, like that of the Post Office, entrusted to the Accountant-General, Posts and Telegraphs, assisted by a staff of Deputy and Assistant Accountants-General.

Inland Tariff.—The tariff for inland telegrams is as follows:—

Private and State.

	Express. Rs. a.	Ordinary. Rs. a.	
Minimum charge ..	1 8	0 12	Address charged for.
Each additional word over 12	0 2	0 1	

Additional charges.

Minimum for reply-paid telegram .. 12 annas
Acknowledgment of receipt .. .. 12 „
Multiple telegrams, each 100 words or less .. .. 4 „
Collation .. .. .. One quarter of charge for telegram.

		Rs.
For acceptance of an Express telegram during the hours when an office is closed.	If both the offices of origin and destination are closed ..	2
	If only one of the offices is closed.	1
	If the telegram has to pass through an intermediate office which itself is closed an additional fee in respect of that office of ..	1
Signalling by flag or semaphore to or from ships—per telegram	The usual inland charge plus a fixed fee of 8 ans.	
Boat hire	Amount actually necessary.	
Copies of telegrams, each 100 words or less	4 annas.	

Press.

	Express. Rs. a.	Ordinary. Rs. a.	
Minimum charge ..	1 0	0 8	Address free.
Each additional 6 words over 48	0 2	0 1	

Ceylon.

Ceylon is not regarded as "Inland" but Portuguese India is.

The following communique was issued by the Government of India on 6th January 1919:—Consequent on the recent revision of the Indian inland telegraph rates, the Government of India, in consultation with the Government of Ceylon, have had under consideration the question of the rates for telegrams exchanged between India and Ceylon. They have now decided with the concurrence of the Colonial Government that from the 1st of February, 1919, there should be an ordinary service for private and State telegrams and telegraphic money orders at the existing rates. An ordinary private telegram to Ceylon will, therefore, be charged for at the rate of one rupee for twelve words, with two annas for each additional word. To meet the requirements of those members of the public who desire special telegraph facilities, an express service will also be introduced from the same date at the rate of two rupees for twelve words, with three annas for each additional word. No charge will be made in the existing rates for press telegrams to Ceylon.

Foreign Tariff.—The charges for foreign telegrams vary with the countries to which they are addressed. The rates per word for private and state telegrams to all countries in Europe except Russia and Turkey are as follows:—

	Private. Rs. a.	State. Rs. a.
Via Turkey (*Suspended*) ..	1 6	....
„ Indo	1 4	0 12
„ Eastern	1 4	0 10

Growth Telegraphs.—At the end of 1897-98 there were 50,305 miles of line and 155,088 miles of wire and cable, as compared with 87,714 and 347,906 miles, respectively, on the 31st March 1918. The numbers of departmental telegraph offices were 257 and 202, respectively, while the number of telegraph offices worked by the Post Office rose from 1,634 to 3,337. The increase in the number of paid telegrams dealt with is shown by the following figures:—

		1897-98.	1917-18.
Inland ..	Private ..	4,107,270	15,021,706
	State ..	860,382	1,891,395
	Press ..	35,910	235,129
Foreign ..	Private ..	735,679	1,843,211
	State ..	9,896	110,576
	Press ..	5,278	35,038
		5,754,415	19,137,055

The outturn of the workshops during 1917-18 represented a total value of Rs. 13,58,000. At the end of the year the total staff numbered 10,960. The total capital expenditure up to the close of 1917-18 amounted to Rs. 13,22,55,330. The net revenue for the year was Rs. 1,19,62,299.

Wireless.—The total number of wireless telegraph stations open for traffic at the end of 1917-18 was twenty, *viz.*, Port Blair, Rangoon, Diamond Island, Table Island, Victoria Point, Madras, Bombay, Sandheads, Calcutta, Karachi, Delhi, Simla, Allahabad, Lahore, Nagpur, Peshawar, Quetta, Secunderabad, Maymyo and Mhow.

The traffic of all kinds disposed of by the ten coast stations during the year involved 77,664 signalling operations in them.

Telephones.—On the 31st December 1917 the number of telephone exchanges established by the Department was 238, of which 58 with 5,422 connections were worked departmentally. The number of telephone exchanges established by Telephone Companies was 13 with 14,741 connections.

The School of Oriental Studies.

This School was established by Royal Charter in June 1916. The purposes of the School (as set out in the Charter) are to be a School of Oriental Studies in the University of London to give instruction in the languages of Eastern and African peoples, Ancient and Modern, and in the Literature, History, Religion, and Customs of those peoples, especially with a view to the needs of persons about to proceed to the East or to Africa for the pursuit of study and research, commerce or a profession, and to do all or any of such other things as the Governing Body of the School consider conducive or incidental thereto, having regard to the provision for those purposes which already exists elsewhere and in particular to the co-ordination of the work of the School with that of similar institutions both in this country and in our Eastern and African Dominions and with the work of the University of London and its other Schools.

The aims of the School may be summarized briefly as follows: (i) To provide a great University centre for Oriental and African studies and research; (ii) to provide training in Languages, Literature, History, Religions, and Customs, for military and civil officers of Government and for any other persons about to proceed to Africa and the East for commercial or other enterprises.

The School has been created as the outcome of the Reports of two Government Committees, the first a Treasury Departmental Committee presided over by Lord Reay, the second an India Office Departmental Committee presided over by Lord Cromer. The School is intended to provide London with a centre for Oriental teaching adequate to the needs of the metropolis and of the Empire, and one that will remove the reproach that London has hitherto been without an Oriental School comparable to those of Paris, Berlin, and Petrograd.

The initial **scheme of teaching** of Modern Oriental Languages recommended by Lord Reay's Committee for the School is as follows:

Group I.—NEAR EAST: *Turkish, Arabic and Persian.*—One Professor, two Readers, three Native Assistants.

Group II.—NORTHERN AND EASTERN INDIA: *Hindi and Hindustani and Bengali.*—One Professor, one Reader, two Native Assistants.

Group III.—WESTERN INDIA: *Marathi and Gujarati.*—One Professor, one Reader (or two Readers), two Native Assistants.

Group IV.—SOUTHERN INDIA: *Tamil and Telugu and Kanarese.*—One Professor one Reader, three Native Assistants.

Group V.—FURTHER INDIA, MALAY ARCHIPELAGO, ETC. *Burmese.*—One Reader, one Native Assistant. *Malay.*—One Reader, one Native Assistant.

Group VI.—FAR EAST: *Chinese.*—One Professor, one Native Assistant. *Japanese.*—One Professor, one Native Assistant.

Group VII.—AFRICA: *Swahili.*—One Reader, one Native Assistant. *Hausa.*—One Reader, one Native Assistant.

The Reay Committee further recommended that £1,000 a year should be spent in teaching the following languages or groups of languages, Armenian, Assamese, Panjabi, Tibetan, Pashto, Sinhalese, Siamese, Melanesian languages, Polynesian languages, Amharic, Luganda, Somali, Yoruba, Zulu. The Committee also recommended that provision should be made in the School for the teaching of classical Oriental studies, *e.g.*, Sanskrit and Palli. Not only the languages, but the history, customs, and religions of the peoples who speaks them will be taught in the School.

The Governing Body are negotiating with the University of London for the transfer to the School of the Oriental teaching hitherto provided at University and King's Colleges.

The School possesses noble and adequate **buildings**, provided for them by Government under the London Institution (Transfer) Act of 1912. The sum of £25,000 required for the alteration and extension of the buildings of the London Institution for the purposes of the School was voted by Parliament. The School buildings are quiet, although they are in the heart of the City. They are only two minutes' walk from the termini of the Great Eastern and Central London Railways and from Moorgate Street Station on the Metropolitan Railway, and about six minutes' walk from the Bank of England. The School was formally opened by the King on 23rd February, 1917, and the first Bulletin of the School (price 6*d.*) was published later in the year.

Finances.—An appeal for an endowment fund was issued in October, 1916, which states that The Berlin School of Oriental Languages had, before the War, an income of £10,000; the income required for the School in London of which the scope is necessarily more extended, is £14,000. Of this sum the School has at present in view an income of about £7,500, including grants from the Imperial Government and the Government of India. The Committee desire to raise an Endowment Fund of £150,000 for this purpose, towards which they have as a result of a preliminary appeal (which was suspended in August, 1914), about £10,000.

Patron, H. M. the King. *Chairman of the Governing Body*, Sir John Hewett. *Honorary Secretary*, P. J. Hartog, Esq., C.I.E.

Industries Commission.

A resolution issued by the Government of India in May, 1916, announced the appointment of a Commission to examine and report upon the possibilities of further industrial development in India and to submit its recommendations with special reference to the following questions:—(*a*) Whether new openings for the profitable employment of Indian capital in commerce and industry can be indicated; (*b*) Whether and if so in what manner Government can usefully give direct encouragement to the industrial development: (1) By rendering technical advice more freely available; (2) by the demonstration of the practical possibility on a commercial scale of particular industries; (3) by affording directly or indirectly financial assistance to industrial enterprises, or (4) by any other means which are not incompatible with the existing fiscal policy of the Government of India.

Subjects Excluded.—The original Resolution expressly directed that certain matters should be excluded from consideration. In framing the terms of reference, said the Resolution, it has been found necessary to exclude two matters from the scope of the Commission's labours. In the first place any consideration of the present fiscal policy of the Government of India has been excluded from its enquiries. In the next place it was not proposed that the Commission should re-examine those aspects of technical and industrial education which have recently been dealt with by a committee working in England and India, whose reports are at present under the consideration of the Government of India.

Personnel.—The Commission, as originally appointed, consisted of the following gentlemen: President Sir T. H. Holland. Members:—Mr. Chatterton, Sir Fazulbhoy Currimbhoy Ebrahim, Mr. E. Hopkinson, Mr. C. E. Low, C.S., Pandit Madan Mohan Malaviya, Sir R. N. Mukerjee, the Rt. Hon. Sir Horace Plunkett, Mr. F. H. Stewart and Sir D. J. Tata.

Sir Horace Plunkett was unable to serve on account of ill-health.

Mr. E. Hopkinson was compelled for the same reason to retire.

The commission met in October 1916 and proceeded on tour, but in February 1917, the appointment of Sir Thomas Holland to the presidency of the newly constituted Indian Munitions Board necessitated an interruption of the Commission's work for some months. The tour was resumed in November, 1917. Sir Thomas Holland presided over the opening session in Bombay, after which he left the Commission and returned to his duties on the Munitions Board. The presidency of the commission was assumed by Sir Rajendranath Mukerji.

The Report.

The Report of the Commission, which was issued in October 1918, is summarised:—

It is important to note that the constructive proposals depend on the acceptance of two principles:—(1) that in future Government must play an active part in the industrial development of the country, with the aim of making India more self-contained in respect of men and material, and (2) that it is impossible for Government to undertake that part, unless provided with adequate administrative equipment and forearmed with reliable scientific and technical advise.

With these principles in mind, it will be convenient first to glance at the administrative machinery which the Commission proposes and then to examine the work which it is intended to do. The administrative proposals include the creation of imperial and provincial departments of Industries and of an Imperial Industrial Service. The imperial department would be in charge of a member of the Viceroy's Executive Council, assisted by a board of three members entitled the Indian Industries Board and be responsible for the industrial policy of Government and the inauguration and carrying out of a uniform programme of industrial development throughout the country. The actual administrative work would be almost entirely decentralised and would devolve on Local Governments. The performance of these duties would necessitate the employment of a large staff of officers whose qualifications would primarily depend upon a knowledge of mechanical engineering; and the formation of an Imperial Industrial Service is suggested in order to safeguard Government against the dangers and difficulties of casual recruiting. This service would consist mainly of mechanical engineers and engineering technologists the majority of whom would be employed under the Local Governments. The headquarters of the Department and of the Board should be with the Government of India.

The provincial departments would be administered by Directors of Industries, assisted by specialists and technical advisers who would usually be seconded from imperial services for work under the Local Government. A provincial Director would thus be able to develope the industries of his province with the help of competent engineers and scientists. He would be advised by a provincial Board of Industries composed mainly of non-officials and he should hold the post of a secretary to Government to secure expeditious and effective despatch of work.

Future Possibilities.—It now remains to consider the work which this organisation is to carry out and the conditions of India which render essential a policy of active intervention on the part of Government in the industrial affairs of the country. The first chapters of the report deal with India as an Industrial country, her present position and her potentialities. They show how little the march of modern industry has affected the great bulk of the Indian population, which remains engrossed in agriculture, winning a bare substence from the soil by antiquated methods of cultivation. Such changes as have been wrought in rural areas are the effects of economic rather than of industrial evolution. In certain centres the progress of western industrial methods is discernible; and a number of these are described in order to present a picture of the conditions

under which industries are carried on, attention being drawn to the shortage and to the general inefficiency of Indian labour and to the lack of an indigenous supervising agency. Proposals are made for the better exploitation of the forests and fisheries. In discussing the industrial deficiencies of India, the report shows how unequal the development of our industrial system has been. Money has been invested in commerce rather than industries, and only those industries have been taken up which appeared to offer safe and easy profits. Previous to the war, too ready reliance was placed on imports from overseas, and this habit was fostered by the Government practice of purchasing stores in England. India produces nearly all the raw materials necessary for the requirements of a modern community; but is unable to manufacture many of the articles and materials essential alike in times of peace and war. For instance, her great textile industries are dependent upon supplies of imported machinery and would have to shut down if command of the seas were lost. It is vital, therefore, for Government to ensure the establishment in India of those industries whose absence exposes us to grave danger in event of war. The report advocates the introduction of modern methods of agriculture and in particular of labour-saving machinery. Greater efficiency in cultivation, and in preparing produce for the market would follow, labour now wastefully employed would be set free for industries, and the establishment of shops for the manufacture and repair of machinery would lead to the growth of a huge engineering industry. After examining the resources for generating power, the report says the coal of India is generally of a poor quality and the radius within which it can be economically used is accordingly limited. Moreover, the extension of metallurgical industries already started involves a sever attack on our visible supplies of cooking coal. The Commission recommends a special survey of the coal position in India. The oil fields of Burma are being rapidly drained and no others of equal value have been proved. Wind power is too intermittent for industrial use. Attention should be directed to more economical methods of using wood fuel, and new materials for industrial alcohol should be investigated. The harnessing of water power appears, however, to afford a more reliable source of energy, especially with a view to the development of thermo-electric industries; and Government is urgently enjoined to undertake a hydrographic survey in order to determine the places which offer possibilities for the establishment of hydro-electric installations.

The Indian in Industries.—The next chapters deal with "The Indian in Industries." They discuss measures designed to improve the efficiency of the Indian artisan and to encourage the educated Indian to take part in industrial enterprise. It is shown that the relative lowness of wages paid to Indian labour is counter-balanced by the comparative inefficiency of the individual Indian workman. The Commission assigns three causes for this inefficiency, viz., the absence of education, the prevailing low standard of comfort and the effects of preventible disease. The Commission expressed itself in favour of universal primary education, but considers that it would be unfair and unjust to impose upon employers this duty, which devolves rather upon the State and local authorities. But education of a technical kind is also required and the method of instruction to be followed will vary for workers in organised and for workers in cottage industries, the latter of whom, it may be remarked, considerably exceed the former in numbers. For cottage industries the Commission proposes an efficient system of education in industrial schools administered by head masters with practical knowledge of the industries taught, and controlled by the Departments of Industries. The extension of marketing facilities must go hand in hand with the teaching of improved processes. In the case of organised industries mechanical engineering is taken as a typical instance, and the proposals include the establishment of a system of organised apprenticeship for a period of four or five years, with practical training in the workshops and theoretical instruction in attached teaching institutions.

The Commission places better housing in the forefront of its recommendations to raise the standard of comfort of the Indian artisan. Subject to certain safeguards, Government should use its powers under the Land Acquisition Act to acquire sites for industrial dwellings, and land so acquired should be leased to employers on easy terms. Special remedies are proposed in the case of Bombay, where the problems of congestion are unique. General measures of welfare work among factory employees are also suggested and special attention should be paid to the improvement of public health. The elimination of such diseases as hookworm and malaria, which are prevalent almost everywhere in India, would add enormously to the productive capacity of the Indian labourer.

The general aversion from industrial pursuits of the educated Indian is ascribed to hereditary predisposition accentuated by an unpractical system of education. A complete revolution in the existing methods of training is proposed. For manipulative industries, such as mechanical engineering, an apprenticeship system, similar to that suggested for artisans should be adopted. The youth who aspires to become a foreman or an engineer, must learn to take off his coat at the start and should serve a term of apprenticeship in the workshops, supplemented by courses of theoretical instruction. At the conclusion of this period of training he may be allowed to specialise in particular subjects. For non-manipulative or operative industries, on the other hand, the teaching institution should be the main training ground, though practical experience is also necessary. Special proposals are made for commercial and mining education; and the future establishment of two imperial colleges is adumbrated, one for the highest grade of engineering and the other for metallurgy. To ensure the maintenance of close relations between the training institutions and the world of industry the general control of technical education should be transferred to the Department of Industries.

Government intervention.—The remaining chapters of the report deal more specifically with Government intervention in

industries. Government clung long to the tradition of *laissez faire* in industrial matters; but when in recent years it attempted to play a more active part in industrial development, its efforts were rendered futile by the absence of scientific and technical advice to assist it in estimating the value of industrial propositions, and by the lack of any suitable agency to carry out approved proposals. To remedy the first of these defects, a reorganisation of the existing scientific services is advocated, in such a way as to unite in imperial services, classified according to science subjects, all the scattered workers now engaged in the provinces on isolated tasks. Rules are suggested to govern the relations between the members of these services and private industrialists seeking advice. The situation of research institutes and the conditions and terms of employment of these services are questions for the decision of which the Commission considers that the appointment of a special committee is necessary.

The administrative machinery with which Government must be equipped and some of the functions which that machinery will enable it to perform have already been described; but there are many other directions in which the development of industries can be stimulated. Useful and up-to-date information on commercial and industrial matters is essential both for Government and for private merchants and industrialists. A scheme is propounded for collecting such information and for making it available to the public through officers of the Department of Industries The purchase of Government stores in the past has been conducted in such a way as to handicap Indian manufactures in competing for orders and to retard industrial development in India. The Commission proposes that the Department of Industries should be in charge of this work and that orders should not be placed with the Stores Department of the India Office until the manufacturing capabilities of India have first been exhausted. A chapter is concerned with the law of land acquisition and enunciates principles in accordance with which Government might compulsorily acquire sites for industrial undertakings; in another, the various methods by which Government might render direct technical aid to industries are explained. The Commission considers that ordinarily Government itself should undertake manufacturing operations only for the production of lethal munitions. The administration of the Boiler Acts, the Mining Rules and the Electricity Act, the employment of jail labour, the prevention of adulteration, patents, and the registration of business names, of trade marks and of partnerships, are matters which are specifically dealt with. In the opinion of the Commission the compulsory registration of partnerships is practicable and the question should be examined by Government with a view to legislation.

Small and Cottage Industries.—Industrial co-operation is discussed with reference to small and cottage industries; and the vexed question of railway rates on industries is considered. The Commission thinks that reduced rates to and from ports have been prejudicial to industrial development and that the position requires careful examination with a view to the removal of existing anomalies. In particular it should be possible to increase the rates on raw produce for export and on imports other than machinery and stores for industrial use. The addition of a commercial member to the Railway Board and the better representation of commercial and industrial interests at the Railway Conference would help to secure a more equable system of rating. The improvement of waterways and the formation of a Waterways Trust at Calcutta are also proposed.

The Commission lays emphasis on the disorganisation of Indian capital and its shyness in coming forward for industrial development. There is no lack of money in the country, yet the industrialist cannot obtain the use of it except on terms so exorbitant as to devour a large part of his profits. There is a crying necessity for the extension of banking facilities in the mofussil. The Commission is disposed to favour the establishment of an industrial bank or banks; but it considers that the appointment of an expert committee is necessary to deal with this subject and ask Government to take action at an early date. As an 'interim' measure, a scheme is popounded for the provisions of current finance to middle class industrialists, by which the banks would open cash credits in favour of applicants approved by the Department of Industries on the guarantee of Government. Various other methods of financial assistance by Government are suggested, in particular the provision of plant for small and cottage industries on the hire-purchase system.

Position summed up.—To sum up, the Commission finds that India is a country rich in raw materials and in industrial possibilities, but poor in manufacturing accomplishment. The deficiencies in her industrial system are such as to render her liable to foreign penetration in time of peace and to serious dangers in time of war. Her labour is inefficient, but for this reason capable of vast improvement. She relies almost entirely on foreign sources for foremen and supervisors; and her *intelligentsia* have yet to develope a right tradition of industrialism. Her stores of money lie inert and idle. The necessity of securing the economic safety of the country and the inability of the people to secure it without the co-operation and stimulation of Government impose, therefore, on Government a policy of energetic intervention in industrial affairs, and to discharge the multifarious activities which this policy demands, Government must be provided with a suitable industrial equipment in the form of imperial and provincial departments of Industries.

The recurring cost of the proposals is estimated at Rs. 86 lakhs; they involve a capital expenture of Rs. 150 lakhs, mainly on educational institutions, and a further capital outlay of Rs. 66 lakhs is anticipated for future developments. The Commission considers that this expenditure may be worked up to at the end of a period of 7 years.

Pandit Malaviya appended a minute of dissent objecting to the appointment of an Industrial Service and recommending the enlistment of the necessary staff for a term of years.

The report has been referred to the Provincial Governments for their opinions, but in anticipation of the final conclusion several Local Governments have already formed industrial departments.

Scientific Surveys.

The Botanical Survey is under the direction of the Superintendent of the Royal Botanic Garden, Calcutta, with whom are associated the Economic Botanists belonging to the Agricultural Department. In 1912 the post of Reporter on Economic Products was abolished and replaced by that of Economic Botanist to the Botanical Survey. Much of the systematic botanical work of India is done for the Department by forest officers and others. Over 2,000 specimens were obtained in 1911-12 by the officer deputed to accompany the Abor Expedition as botanist, and a material addition was made to the information available as to the vegetation of the little-known frontier region traversed.

Geological Survey.—The first object of the Department is the preparation of a general geological map of India. Various economic investigations, which form an increasingly important part of the Department's work, are also conducted. These include investigation of marble and sandstone quarries for the purpose of building Imperial Delhi, the examination of the Korea coal-field in the Central Provinces, of petroliferous localities in the Punjab and North-West Frontier Province, of pitchblende areas in the Gaya District, &c.

Zoological Survey.—A scheme for the formation of a Zoological Survey on the basis of the Zoological and Anthropological Section of the Indian Museum, Calcutta, came into force in July, 1916. The proposals as sanctioned by the Secretary of State mainly are as follows:—The headquarters of the Survey will be the Indian Museum. The scheme regarding the Zoological Survey entails the breaking up of the organisation now known as the Zoological and Anthropological Section of the Indian Museum into two parts, one of which will become a Government department under the title of the Zoological Survey of India, and will be primarily concerned with zoological investigation and exercise such advisory functions as may be assigned to it by Government, while the other part will remain as the office of the Trustees of the Indian Museum and will be organised for the present on the lines laid down in the existing by-laws of the Museum. It will be the duty of the Zoological Survey to act as guardians of the standard zoological collection of the Indian Empire, and as such to give every assistance in their power both to officials and to others, in the identification of zoological specimens submitted to them, arranging, if requested to do so, to send collections to specialists abroad for identification in cases in which no specialist is available in India. The Director of the Survey is Dr. Anandale.

Mammal Survey.—An important movement has recently been inaugurated by the Bombay Natural History Society which has collected subscriptions for a survey of the mammals of India. This Survey was begun in 1911 with the object of getting together properly prepared specimens of all the different kinds of Mammals in India, Burma and Ceylon so that their distribution and differences might be more carefully worked out than had been done before, also to form as complete as possible a collection of specimens for the Society's Museum in Bombay. Before the Survey started the Society had a very small collection, and even in the British Museum in London the Indian specimens were very poorly represented. Three trained collectors from England are in the service of the Society and the specimens obtained by the Survey are being worked out at the British Museum and duplicates presented to the different Indian Museums. In India most of the country has been worked on the West Coast from Coorg as far north as Mount Abu, also the Central Provinces, Kumaon and Bengal. The whole of Ceylon has been worked, and so has a considerable part of Burma. At the present time owing to the war only one collector is in the field in Sikkim, the others having gone to the front. Funds for the Survey were raised by subscription from the principal Native Chiefs and some prominent Bombay citizens together with grants from the Government of India, the Government of Ceylon, the Government of Burma, the Government of the Malay States, and the different local Governments as well as donations from the Royal Society, the British Museum and the Zoological Society of London.

The Board of Scientific Advice.—This Board includes the heads of the Meteorological, Geological, Botanical, Forest, and Survey Departments, representatives of the Agricultural and Civil Veterinary Departments, and other scientific authorities whose special attainments may be useful. It was established in 1902 to co-ordinate official scientific inquiry, to ensure that research work is distributed to the best advantage, and to advise the Government of India in prosecuting practical research into those questions of economic or applied science on the solution of which the agricultural and industrial development of the country so largely depends. The programmes of investigation of the various departments are annually submitted to the Board for discussion and arrangement, and an annual report is published on the work done, as well as a general programme of research for the ensuing year. The reports and the programmes formulated are communicated for consideration to an Advisory Committee of the Royal Society, who from time to time furnish valuable suggestions and advice.

The Secretary to the Government of India (Department of Revenue and Agriculture) is *ex-officio* President of the Board which includes the Director-General of Observatories, the Superintendent of the Indian Museum, the Surveyor-General of India, the Principal, Punjab Veterinary College, the Director of the Indian Institute of Science, the Inspector-General of Forests, the Agricultural Adviser to the Government of India, the Director of the Geological Survey, the Director-General, Indian Medical Service, the Secretary to the Government of India, Public Works Department, and

the Director of the Botanical Survey of India who is Secretary to the Board of Scientific Advice.

The **programme** of the various departments for 1915-16 includes the following: The Meteorological Department will continue observational work with pilot baloons at various stations, and will also do some experimental work on vertical air currents at Agra, besides collating charts representing types of weather, with notes giving explanations and references to other cases of occurrence of the same type for daily weather forecasting. In the Astronomical Department a new spectro-heliograph is under construction which, it is hoped, will be completed during the year. Five more seismographs, two at Simla, two at Calcutta, and one at Bombay, the Avilne Seismograph at Kodaikanal and several instruments of local manufacture at Bombay will be kept in use during the year. A botanical survey is being carried out, and the Economic Botanist will improve and arrange his exhibits. Plant breeding and plant improvement work will be continued on wheat, tobacco, gram, fibre plants, indigo, oilseeds and fruit. Entomology will include general investigations of crop pests and especially of pests of rice, sugarcane, and cotton, fruit trees, and stored grain, while in pathological entomology a closer connection with veterinary work will be aimed at. Under the head of agriculture the following are the lines of work in progress:—Economics of cultivation by steam and motor engines, puddling of rice land by double engine system of steam cultivation, combination of irrigation and drainage in the growing of rice, study of inheritance of the more important characters of dairy cattle by crossing, building up of milk pedigree in cattle by selection.

The Indian Research Fund.—Scientific research work is rapidly developing in India. In 1911 the sum of 5 lakhs (£33,000) out of the surplus opium revenue was set aside as an endowment for research into epidemic diseases in connection with the Central Research Institute, at Kasauli. It was hoped that this sum might be largely augmented by private subscriptions. An Indian Research Fund Association was constituted, and a good deal of work has already been undertaken. Its objects are defined as "the prosecution and assistance of research, the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of communicable diseases." Fresh investigations into kala azar and cholera have been inaugurated, and an officer was deputed, at the expense of the Fund, to study yellow fever in the regions where it is endemic, with a view to taking steps to prevent its introduction into India. A further grant of 6 lakhs (£40,000) was made to the Central Research Fund from the opium surplus of 1911-12. It has been decided to devote to research and anti-malarial projects 5 lakhs (£33,000) a year from Imperial revenues commencing in 1913-14. A new periodical, "The Indian Journal of Medical Research," was instituted in 1913 and is published four times annually, as the official organ of the Research Fund. The journal deals with every branch of research directly or indirectly connected with medical and sanitary science, and forms a record of what is being done in India for the advance of this work. For the year 1917-18 the Board recommended the continuance on the existing lines of the following inquiries:—Beri Beri by Lieutenant-Colonel McCarrison; Leprosy by Dr. Sudhamoy Ghosh; Hook-worm by Dr. K. S. Mhaskar; Plague Prevention by Dr. G. D. Chitre; Entomological by Mr. Awati and Mr. Mitter. A grant was been made to Lieut.-Col. Glen Liston for experiments with hydro-cyanic acid gas as a disinfectant.

Survey of India.—The work of the Survey of India Department falls under various heads, namely, the trigonometrical survey, topographical and forest surveys, special surveys and explorations, and map production. Cadastral surveys are now carried out by the Provincial Land Records and Settlement Departments.

In 1904 attention was drawn to the defective state of the **topographical survey maps**, and a Committee was appointed to report on the subject. To overtake the arrears of revisional survey and to secure that the map of India should be brought up to date and revised at proper intervals, they recommended a considerable increase of establishment and an increased expenditure of £210,000 a year for the next 25 years. They also made recommendations for altering the size and improving the quality of the maps. After further inquiry the Government of India decided that a scale of 1 inch to the mile would ordinarily be sufficient, reserved forests and special areas being surveyed on the scale of 2 inches to the mile, and the ½-inch scale employed for waste and barren tracts.

THE IMPERIAL INSTITUTE.

The Imperial Institute, South Kensington, has been placed by the Imperial Institute (Management) Act of 1916 under the control of the Secretary of State for the Colonies as representing the central authority for the Dominions, Colonies, and Protectorates of the Empire. The actual management of the Institute will be with an executive council of twenty-five members, which, subject to the general control of the Secretary of State for the Colonies, will possess considerable autonomy and will be the governing body of the Institute. India is to be represented on this council by four members, one nominated by the Government of India, two by the Secretary of State for India, and one by the Secretary of State for the Colonies. In addition, it is understood that there will be a special Indian Committee of the Council with co-opted members—an arrangement which will greatly increase the connection of the Institute with Indian interests and, it is hoped, will promote the development of those activities of the Institute for Indi which are most needed in England.

An account of the work done by the Institute for India, by Dr. W. R. Dunstan, Director of the Imperial Institute, has lately been published in the *Bulletin* of the Institute.

The **Indian Collections** of the Imperial Institute, which have been completely reor

ganised in recent years, constitute the Indian Section of the Public Exhibition Galleries. They include a representation of the important raw materials of India, illustrations of its chief industries and their results, tabular information and diagrams respecting Indian trade and commerce, maps, pictures, and photographs of its cities and industries.

Technical Information Bureau.—Ever since the Scientific and Technical Research Department was started, a most important part of its work has been, in addition to conducting researches, to collect and critically collate all published information respecting the production and industrial uses of raw materials, and it has gradually come to be recognized as a central clearing-house for information of this character. Merchants and manufacturers in England, as well as producers in India and the Colonies, have applied in increasing numbers for information on these subjects. In order to be in a position to deal more effectively with such enquiries, a special branch of the department was formed in 1914, whose business it is, in collaboration with the staff of the Scientific and Technical Research Department, to collect and distribute technical information. Since the war this branch, known as the Technical Information Bureau, has been very full of work, and has not only dealt with a large number of inquiries as to Indian materials and their possibilities, but has taken the initiative with British manufacturers and merchants in bringing to their notice important Indian materials which await a new market.

The Institute has a library and map rooms, which are important auxiliaries to this work and publishes quarterly the *Bulletin* which has played a conspicuous part in making known throughout the Empire the results of researches conducted at the Institute, and the records of progress in the various aspects of the production and utilisation of commercial and economic materials.

NATIVE PASSENGER SHIPS.

The following Resolution by the Government of India was issued in October 1913, as result of inquiries set on foot after the loss of the Titanic:—

"The Board of Trade made a comprehensive revision of the scale of boats and life-saving appliance to be provided on board ships in the United Kingdom and appointed committees of experts to deal with collateral questions arising in the same connection. Meanwhile, the maritime local Governments have been consulted as to the necessity for revising the rules which govern vessels in British India, particularly those under the Native Passenger Ships Act, 1887, the Pilgrim Ships Act, 1895, and the Indian Emigration Act, 1908, which are read with the notifications detailed above. The replies show that while a revision is undoubtedly necessary, there is a great divergence of opinion as to the extent to which it is required and the rules on which it should proceed. The subject is one of considerable difficulty and complexity, involving a number of technical and other questions which need careful scrutiny. The Government of India therefore decided to appoint a committee representative of official and non-official interests to enquire generally into the sufficiency of the existing rules and report its views to the Government. The committee consisted of the following President and members:—President, Mr. C. G. Madhunter, I.C.S., Collector, Madras Presidency. Members—the Hon'ble Sir Fazulbhoy Currimboy Ebrahim, Bombay; Commander C. J. C. Pendall, D.S.O., R.I.M., Port Officer, Calcutta; Mr. W. H. Ogston, partner in Messrs. Killick, Nixon & Co., Bombay; Captain P. Dest Bonix, Marine Department, British India Steam Navigation Company, Calcutta."

The Committee met at Bombay and subsequently visited other ports. It was to submit its report to the Government of India on the 1st March 1914, but the report has not been published.

Difficulties of the Question—The appointment of the committee was welcomed by the press, though some criticisms were directed against the apparent narrowness of the scope of the inquiry. The whole subject is one of considerable difficulty and complexity. It is well-known that the standards laid down under the enactments now in force are not adequate to provide accommodation for all on board. It would be invidious to specify any one vessel to illustrate the inadequacy of the present standards, but it may roughly be said that, on the assumption that the cubic capacity which should be provided in life-boats should be at the rate of ten cubic feet per adult, the accommodation now provided will only afford room for 20 to 50 per cent. of the number of passengers carried. The question is further complicated by reason of the fact that of a number of native passenger ships many are never out of sight of land during their voyages, and that any insistence on the principle that there should be life-boat accommodation for all on board will necessarily result in the curtailment of the carrying capacity. It is doubtful therefore whether, in the case of passenger ships which are engaged in the carriage of passengers between ports separated by inconsiderable distances, some relaxation should not be allowed in the matter of providing life-boat accommodation for all on board. The matter is thus essentially one for local investigation.

Working of the Act.—Under the Native Passenger Ships Act (X of 1887) the term "Native Passenger Ships" is applied to sailing-ships, which carry as passengers more than thirty natives of Asia or Africa, and to steam-ships carrying more than sixty such natives. Local Governments have discretionary power, with the sanction of the Governor-General in Council, to alter these numbers to fifteen and thirty, respectively. A long voyage is defined in the Act as a voyage in which the ship will, in ordinary circumstances, be continuously out of port for one hundred and twenty hours or more and a short voyage as one in which the ship will not, in ordinary circumstances, be continuously out of port for one hundred and twenty hours. The space allotted to passengers, and some of her conditions, differ in a long and a short voyage.

The Public Trustee.

The Public Trustee of England is a Government Official created by Statute (Public Trustee Act, 1906), whereby the State acts as an executor or as a trustee under Wills, and as a trustee under Settlements, whether these instruments are new or old, and in other offices of an analogous character.

The office has been a great success; in the seven years that it has been open the value of the trusts in course of administration have amounted, in round figures, to £50,000,000, while the estimated value of Wills lodged in the Department which have yet to mature is put at some £59,000,000, showing a total value of business of all kinds negotiated at £110,000,000.

Fees chargeable.—The office is now entirely self-supporting and is no charge upon the tax-payer. A provision of the Statute declares that the Office is to make no profit but to charge only such fees as may provide the working expenses and constitute a reserve fund against the liabilities assumed by the State for breach of trust. In accordance with this mutual principle the fees have already been reduced from their original scale, and the cash surplus of fees over expenses, regarded as the nucleus of a reserve fund for all contingencies, is now £14,585.

The main fees are of two kinds—a fee on capital and a fee on income. The fees on capital are taken in two instalments—an instalment of half taken at the beginning, and another instalment of half taken at the end of a trust—each instalment being calculated at the following rates:—

On the first £1,000, fifteen shillings per cent.

On the excess of £1,000 to £20,000, five shillings per cent.

On the excess of £20,000 to £50,000, two shillings and six pence per cent.

On the excess of £50,000, one shilling and three pences per cent. The **Fee on income** is one per cent. if, as is usual, the income be paid direct from its source to the person entitled, on any income in excess of £2,000 a year the fee is only ½ per cent. Where the income is paid through the Department then the fee is two per cent. up to £500 a year, and one per cent. on any excess of £500 a year, and ½ per cent. on income in excess of £2,000 a year. The fee on investment is ½ per cent.: the Public Trustee, out of this fee paying the brokerage. There is power to vary these fees to meet the peculiar circumstances of special cases; but owing to the low range of the fees, and their mutual character the power of reduction is but seldom exercised, except perhaps in the case of large trusts.

The Department has been organised upon lines followed by commercial organisations. Forms are avoided wherever possible, the methods of the Office prescribing prompt attention to all matters within the day.

The particulars of any trust in which it is desired that the Public Trustee should act may be brought to his notice by letter or by personal interview, and upon his assent being obtained, his appointment should be effected in the ordinary way as in the case of private trustees. In the case of a Will about to be made, his appointment can be secured by the simple provision "I appoint the Public Trustee of England as the executor and trustee of this my Will."

One of the forms of trusteeship which would appeal to English people residing in India is a scheme known as a "**Declaration of Trust.**" An official pamphlet explains that the Public Trustee's services have been requested by people who, either because of professional or business pre-occupation, or from want of experience in dealing with money matters, or from the disadvantages which might attach to Governmental, professional or business disabilities abroad, are not well placed to select and supervise their investments. It would appear that the services of the Department in this matter were first requisitioned by officers taking up appointments in India; and, following out their request for individual assistance, this scheme of trust came to be devised, and has been found to commend itself to the circumstances of a very large circle of persons similarly disadvantaged. A Declaration of Trust is an **inexpensive form of trusteeship** by virtue of which the owner practically retains full control over his capital. The property is made over to the Public Trustee either in the form of money to be invested or specific securities transferred into his name; and thereupon the Public Trustee executes a short "declaration" setting out that he holds the money invested or the securities in trust for the transferor. The result of this is that income, as it accrues, is paid to the owner or to any beneficiary as he may direct. A wide field of investment is permissible, as the trust provides that the funds may be invested as the owner may from time to time direct. As the pamphlet sets out interest at the rate of at least 4 per cent. is to be looked for under the scheme from investments of a non-speculative character. It should be understood that this form of trusteeship is not analogous to a bank deposit, where the return of the capital at par, given the solvency of the bank, is expected. Investments are selected with the greatest care in consultation with the owner, but it must be understood that the Public Trustee does not accept responsibility for any fluctuation of any of the investments chosen. The fees payable for this scheme of trusteeship so far as the capital fees are concerned, are half those payable in the case of an ordinary settlement. The other fees are the same as the ordinary fees.

The appointment of the Public Trustee secures certain definite advantages inasmuch as he is by Act of Parliament a Corporation Sole; and thus it is said the Public Trustee never dies, so that the expense of appointment of other Trustees is permanently avoided. His

ntegrity is guaranteed by the State, while the easure of his success would indicate that he necessarily experienced and skilled in his uties.

Close personal attention is given by the ublic Trustee and his senior officers to the etails of every trust; and as regards the work f investment, a large organisation has been et up to give the best consideration not only o the selection of investments but to the duty f keeping them under frequent observation.

An Advisory Committee of men of recognised authority has, in the past year, been ppointed by the Lord Chancellor to assist the ublic Trustee by a quarterly review of the ivestments made. In the last Annual Report he Public Trustee speaks of having secured a eturn of £3-19-4 per cent. upon his trustee ivestments and a return of £4-10-1 per cent. pon his non-trustee investments.

The success of the Department would seem o show that there is a widespread public need n England for such an Office, and the energy nd efficiency with which the Department has een constituted and conducted has been a reat factor in commending it to the public. he State Guarantee is also doubtless a factor f great importance. A statutory rule provides that strict secrecy shall be observed in respect of all trusts administered in the Department.

The administration is subject to an audit by the Controller and Auditor-General (the Government Auditor), while the internal organisation has been built up upon the principle of a check and counter-check upon the administration.

An important section of the Statute gives the Public Trustee power to direct an audit and investigation of the condition and accounts of any trust.

Officials in India will doubtless tend to make an increasing use of the Department. As a Government Office, its stability will commend itself to them as a medium to safeguard their interests under Wills or Settlements which can be entirely relied upon, and free from the risks and expense attendant upon any other forms of trusteeship.

Further information upon details and copies of the official pamphlet, reports and rules, etc., can be obtained of the official agents to the Department, *viz* :—Messrs. King, Hamilton & Co., Calcutta and in Bombay, Messrs. King, King & Co., whose head office is Messrs. Henry S. King & Co., 65, Cornhill, London, E. C.

THE ADMINISTRATOR-GENERAL.

In India the functions of a Public Trustee are ivided in each Province between two officials, he Administrator-General and the Official rustee.

The office of **Administrator-General** was rst constituted by Indian Act VII of 1849. here were several later enactments on the ubject, all of which have ceased to be in force. he present law is to be found in Indian Act II of 1913, which contains the following provi- ions :—There are three Administrators-General n each of the Presidencies of Bengal, Madras, nd Bombay. Their combined jurisdiction overs the whole of British India. The Adminis- rator-General is entitled to letters of adminis- ration, when granted by a High Court, unless hey are granted to the next of kin. In the ther Courts he is entitled to letters in prefer- nce to a creditor, a legatee other than a univer- al legatee, or a friend of the deceased.

If any person who is not an Indian Christian, Hindu, Mohammedan, Persian, Buddhist dies eaving within any Presidency assets exceeding he value of Rs. 1,000 and if no person to whom ny Court would have jurisdiction to commit dministration of such assets has, within one nonth from his death, applied in such Presi- lency for probate or letters of administration, he Administrator-General is required to apply or letters of administration. In case of ap- rehended danger of misappropriation, dete- ioration, or waste of assets left by the deceased n the towns of Calcutta, Madras, and Bombay, he High Courts may direct the Administrator- General to apply for letters of administration. He can also be required to collect and hold assets until a right of succession or administra- ion is determined. Probate and letters of ad- ministration granted to an Administrator-General have effect throughout the Presidency, but the High Court can direct that they have effect throughout one or more of the other Presidencies. A private executor or administrator may with the assent of the Administrator-General transfer the assets of the estate to the Administrator-General. There are provisions in the Act with regard to the revocation of grants and the distribution of assets. When the assets do not exceed Rs. 1,000 in value, the Administrator-General may, when no probate or letters of administration have been granted, give a certificate to a person, claiming otherwise than as a creditor to be interested in such assets, entitling him to receive the assets. There is also power in certain events to give such certificate to a creditor. There is a further power to send the residue of the assets to the country of domicile of the deceased. The Government of India is required by the Act to make good all sums for which the Administrator-General would be personally liable if he had been a private administrator, except where the Administrator-General and his officers have in no way contributed to the liability.

Fees both on capital and on income are payable out of the estates taken charge of by the Administrator-General. The fees on capital vary from 3 per cent. on the gross value in the case of small estates to 2 per cent. in the case of large estates. The fees on income vary in the case of moveable property from 2 per cent. to 3 per cent., and in the case of immovable property from 3 per cent. to 5 per cent. When the Court has directed the Administrator-General to collect and hold the assets a fee of 1 per cent. on the value of the assets taken possession of, collected, realised, or sold is payable. A small fee is also payable in cases where the

Administrator-General grants a certificate. the Administrator has power to reduce the fees to one-half.

Official Trustee.—The office of Official Trustee dates from the year 1843. By Indian Act XVII of that year the Supreme Court had power to appoint the Registrar or other officer of the Court to be a trustee, where there was no trustee willing to act. Act XVII of 1843 was repealed by Act XVII of 1864, which was in its turn repealed by Act II of 1913, which contains the present law on the subject. There are three Official Trustees. The Official Trustee of Bengal has powers in the greater part of India. The powers of the Official Trustee of Bombay extend to the Bombay Presidency and the Province of British Baluchistan ; those of the Official Trustee of Madras extend to the Madras Presidency and the Province of Coorg. The Government can appoint Deputy Official Trustees.

An Official Trustee can (*a*) act as an ordinary trustee, (*b*) be appointed trustee by a Court of competent jurisdiction. He has, except as otherwise provided, the same powers, duties, and liabilities as ordinary trustees. He ma decline any trust. He may not accept any trus under any composition or scheme of arrange ment for the benefit of creditors, nor of an estate known or believed by him to be insolvent He cannot accept a trust for a religious purpose or for the management or carrying on of an business. He cannot administer the estate of deceased person unless he be sole executor an sole trustee under the will. He cannot be ap pointed trustee along with any other person With his consent he may be appointed truste in the instrument making the trust, and he may accept a trust contained in a will. When pro perty is subject to a trust,and there is no truste within the jurisdiction willing or capable to act the High Court may appoint the Official Trus tee as trustee. He may also be appointed a trustee by the surviving or continuing trustee of a trust, and all persons beneficially interested therein.

As in the case of an Administrator-General, the Government of India is responsible for the acts or defaults of an Official Trustee. Fees are payable at rates fixed by the Government.

PROVING OF WILLS.

In British India if a person has been appointed executor of the will of a deceased person, it is always advisable to prove the will as early as possible. If the will is in a vernacular it has to be officially translated into English. A petition is then prepared praying for the grant of probate of the will. All the property left by the deceased has to be disclosed in a schedule to be annexed to the petition. The values of immoveable properties are usually assessed at 16⅔ years purchase on the nett Municipal assessment. For estate under Rs. 10,000 the probate duty payable is 2 %; between Rs. 10,000 and Rs. 50,000 the duty payable is 2½%. Over 50,000 rupees the duty payable is 3%. In determining the amount of the value of the estate for the purposes of probate duty the following items are allowed to be deducted :—

1. Debts left by the deceased including mortgage encumbrances.
2. The amount of funeral expenses.
3. Property held by the deceased in trust and not beneficially or with general power to confer a beneficial interest.

The particulars of all these items have to be stated in a separate schedule. It is the practice of the High Court to send a copy of these schedules to the Revenue authorities and if the properties particularly immoveable properties have not been properly valued, the Revenue department require the petition to be amended accordingly. In certain cases the Court then requires citations to be published and served on such persons as the Court thinks are interested in the question of the grant of probate. If no objection is lodged by any person so interested within 14 days after the publication or service of citation and if the will is shown to have been properly executed and the petitioner entitled to probate, probate is ordered to be granted.

Freemasonry.

In an Institution so universal as Freemasonry the growth of that body in any particular part of the world is usually similar in all respects to the development in other parts. When Freemasonry was first established in Bombay and became strong enough to have its own Provincial Grand Lodge, the Grand Master of English Freemasons appointed James Todd, Lieutenant of Police, as the first Provincial Grand Master in 1764. This office he held until 1798, when the Provincial Grand Lodge seems to have gone into abeyance. A revival apparently set in in 1833, and Lodge Orion in the West was founded at Poona. This was followed in 1844 by Lodge St. Andrews at Kamptee and in 1848 by Lodge St. George in Bombay. In 1861 the Provincial Grand Lodge was revived and George Taylor was appointed P. G. M.

In 1870 a fresh warrant was issued by which the Provincial Grand Lodge of Bombay was altered to District Grand Lodge with James Gibbs as D. G. M. The next D. G. M. was Edward Tyrrell Leith who took charge in 1879, and he was followed in 1887 by H. R. H. the Duke of Connaught. The remainder of the District Grand Masters were H. E. Lord Sandhurst 1895-1899, H. E. Lord Northcote 1900-1902, Hon. Sir Lawrence Jenkins 1903-1907 and J. Owen W. Dunn 1908-1911. The present D. G. M. being W. Alban Haig-Brown who was appointed in 1912.

Under the skilful management of these illustrious men the District has grown until now there are under the District Grand Lodge of Bombay 40 Lodges with a total membership of over 2,000.

At the same time the Royal Arch and Mark degrees have also prospered and there are 18 Chapters with a total membership of over 600 and 11 Mark Lodges totalling over 300.

DISTRICT GRAND LODGE E. C.

List of Principal Officers, 1917.

BENGAL.

R. W. District Grand Master, Lord Ronaldshay, G.C.I.E.

Deputy District Grand Master, Col. A. H. D. Creagh, C. M. G.

District Senior Grand Warden, The Hon'ble Mr. Kiran Chunder De, C.I.E.

District Junior Grand Warden, The Hon. Mr. N. D. Beatson Bell, C.I.E.

District Grand Secretary, J. A. Dolton, 19, Park Street, Calcutta.

BOMBAY.

R. W. District Grand Master, W. A. Haig-Brown, J.P.

Deputy District Grand Master, C. B. Robinson, J.P., P.G.D. (Eng.).

District Senior Warden, S. S. K. Gaikwad.

District Junior Grand Warden, Col. W. B. Lane.

District Grand Secretary, J. F. Pennock, V.D., P.A.G.D.C. (Eng.) King's Building, Fort, Bombay.

MADRAS.

R. W. District Grand Master, Hon. Mr. Ll. E. Buckley.

Deputy District Grand Master, C. J. Higgs, P. G. D. (Eng).

District Senior Grand Warden, V. Tirumalai Pillai.

District Junior Grand Warden, Brig.-General H. F. Lock.

District Grand Secretary, J. H. B. Brougham, Mount Road, Madras.

PUNJAB.

Rt. Wor. District Grand Master, Col. Henry. T. Pease, C.I.E., P.G.D. (Eng).

Deputy District Grand Master, Vacant.

District Grand Secretary, David E. Johnston, Freemasons' Hall, Lahore.

BURMAH.

R. W. District Grand Master, The Hon. Mr. Justice E. W. Ormond.

Deputy District Grand Master, W. Kin.

District Senior Grand Warden, W. Archibald.

District Junior Grand Warden, Rev. J. Lister.

District Grand Secretary, W. Kindall.

GRAND LODGE OF ALL SCOTTISH FREEMASONRY IN INDIA.

Installation—November (St. Andrew's Day)

COMMUNICATION—4th Saturday, in January, April, July, and October.

PLACE OF MEETING—Freemasons' Hall, Ravelin Street, Bombay.

Grand Master, The Hon'ble Justice Sir Frank Beaman, I.C.S.

Grand Master Depute, Pestonjee M. Kanga.

Substitute Grand Master, L. H. Savile.

Grand Superintendent of Central India, W. E. Jardine, C.I.E., I.C.S.

Grand Superintendent of Eastern India, W. R. Gourlay, I.C.S.

Senior Grand Warden, G S. Curtis, C.S ., I.C.S.

Do. do do. A. N. Thorpe.

Do. do. do. A. Pellymounter.

Junior Grand Warden, C. H. Captain.

Do. do do. Dr. H. P. Joseph.

Do. do. do. D. F Mackie.

G. Secretary—ARTHUR W. WISE, Elphinstone Building, Murzban Road, Fort, Bombay.

BENGAL MASONIC ASSOCIATION.

For Educating Children of Indigent Freemasons.

President.—Lord Ronaldshay G.C.I.E., *District Grand Master.*

This Association is supported by capitation assessments from the Lodges in the District of Bengal and by voluntary contributions.

1. A donation of Rs. 500 made in one or more payments of not less than Rs. 50 each constitutes the donor a *Vice-President* for *Life* with the privilege of five votes.

2. A donation of Rs. 100 constitutes the donor a *Governor* for *Life*, with the privilege of one vote and one vote for each additional donation of Rs. 100.

3. A subscription of Rs. 16 per annum entitles the subscriber to one vote for the year and an extra vote for every additional Rs. 16.

4. The conditions of the above are the same whether the donor or subscriber be an individual or a Lodge, Chapter, or any other society.

5. A general meeting of subscribers is held twice in the year, at Freemasons' Hall, Calcutta, 19, Park Street.

6. The general conduct of the affairs of the Association is entrusted to a Committee composed of the President, Treasurer, and Secretary, and of five Members to be elected at the February Half-yearly General Meeting.

7. The funds of the Association are devoted solely to the board and education of children.

8. Children are admitted into the Association at the age of seven years and continue therein till they have attained the age of seventeen years.

This rule applies equally to children of both sexes without any distinction of religious denominations.

9. Elections take place at each General Meeting of Subscribers according to the number of vacancies and capabilities of the fund.

10. No child is eligible to be placed on the List of Candidates unless his father has been a Registered Mason for five years and Subscribing Member of some Lodge for at least three years of that period.

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Indian Architecture.

I. ANCIENT.

The architecture of India has proceeded on
es of its own, and its monuments are unique
ong those of the nations of the world. An
dent civilization, a natural bent on the part
the people towards religious fervour of the
templative rather than of the fanatical
t, combined with the richness of the country
the sterner building materials—these are
w of the factors that contributed to making
hat it was, while a stirring history gave it
h variety and glamour. Indian architec-
e is a subject which at the best has been
died only imperfectly, and a really com-
hensive treatise on it has yet to be written.
e subject is a vast and varied one, and it
y be such a treatise never will be written
the form of one work at any rate. The
rit of Indian art is so foreign to the European
art culture that it is only one European in
nundred who can entirely understand it,
dile art criticism and analysis is a branch of
dy that the modern Indian has not as yet
ntured upon to any appreciable extent.
therto the one, and with a few exceptions
e only recognized authority on the subject
s been Fergusson, whose compendious work
that which will find most ready acceptance
the general reader. But Fergusson attempt-
the nearly impossible task of covering the
ound in one volume of moderate dimensions,
d it is sometimes held that he was a man
too purely European a culture, albeit wide
d eclectic, to admit of sufficient depth of
ight in this particular direction. Fergus-
n's classification by races and religions is,
wever, the one that has been generally ac-
pted hitherto. He asserts that there is no
ne architecture in India of an earlier date
an two and a half centuries before the Christ-
n era, and that "India owes the introduc-
n of the use of stone for architectural pur-
es, as she does that of Buddhism as a state
ligion, to the great Asoka, who reigned B.C.
2 to 236."

Buddhist Work.

Fergusson's first architectural period is
en the Buddhist, of which the great tope
Sanchi with its famous Northern gateway
perhaps the most noted example. Then
e have the Gandharan topes and monas-
ries. Perhaps the examples of Buddhist
chitecture of greatest interest and most ready
cess to the general student are to be found
the Chaitya halls or rock-cut caves of Karli,
junta, Nasik, Ellora and Kanheri. A point
ith relation to the Gandhara work may be
luded to in passing. This is the strong
uropean tendency, variously recognized as
oman, Byzantine but most frequently as
reek, to be observed in the details. The
liage seen in the capitals of columns bears
rong resemblance to the Greek acanthus,
hile the sculptures have a distinct trace of
reek influence, particularly in the treatment
drapery, but also of hair and facial expression.
rom this it has been a fairly common assump-
on amongst some authorities that Indian art
wed much of its best to European influence, an
sumption that is strenuously combated by
hers as will be pointed out later.

The architecture of the Jains comes next in order. Of this rich and beautiful style the most noted examples are perhaps the Dilwara temples near Mount Abu, and the unique "Tower of Victory" at Chittore.

Other Hindu Styles.

The Dravidian style is the generic title usually applied to the characteristic work of the Madras Presidency and the South of India. It is seen in many rock-cut temples as at Ellora; where the remarkable "Kylas" is an instance of a temple cut out of the solid rock, complete, not only with respect to its interior (as in the case of mere caves) but also as to its exterior. It is, as it were, a life-size model of a complete building or group of buildings, several hundred feet in length, not built, but sculptured in solid stone, an undertaking of vast and, to our modern ideas, unprofitable industry. The Pagoda of Tanjore, the temples at Srirangam, Chidambaram, Vellore, Vijayanagar, &c., and the palaces at Madura and Tanjore are among the best known examples of the style.

The writer finds some difficulty in following Fergusson's two next divisions of classification, the "Chalukyan" of South-central India, and the "Northern or Indo-Aryan style." The differences and the similarities are apparently so intermixed and confusing that he is fain to fall back on the broad generic title of "Hindu"—however unscientific he may thereby stand confessed. Amongst a vast number of Hindu temples the following may be mentioned as particularly worthy of study:—Those at Mukteswara and Bhuvaneswar in Orissa, at Khajuraho, Bindrabun, Udaipur, Benares, Gwalior, &c. The palace of the Hindu Raja Man Singh at Gwalior is one of the most beautiful architectural examples in India. So also are the palaces of Amber, Datiya, Urcha, Dig and Udaipur.

Indo-Saracenic.

Among all the periods and styles in India the characteristics of none are more easily recognizable than those of what is generally called the "Indo-Saracenic" which developed after the Mahomedan conquest. Under the new influences now brought to bear on it the architecture of India took on a fresh lease of activity and underwent remarkable modifications. The dome, not entirely an unknown feature hitherto, became a special object of development, while the arch, at no time a favourite constructional form of the Hindu builders, was now forced on their attention by the predilections of the ruling class. The minaret also became a distinctive feature. The requirements of the new religion,—the mosque with its wide spaces to meet the needs of organized congregational acts of worship—gave opportunities for broad and spacious treatments that had hitherto been to some extent denied. The Moslem hatred of idolatry set a tabu on the use of sculptured representations of animate objects in the adornment of the buildings, and led to the development

of other decorative forms. Great ingenuity came to be displayed in the use of pattern and of geometrical and foliated ornament. This Moslem trait further turned the attention of the builders to a greater extent than before to proportion, scale and mass as means of giving beauty, mere richness of sculptured surface and the aesthetic and symbolic interest of detail being no longer to be depended on to the same degree.

The art was thus the gainer by the new conditions. It gained in power and variety much as "Classic" architecture gained under the Romans. But it equally lost something too. The Indo-Saracenic is apt to appear cold and hard. The writer was impressed by this on his first view of the Gwalior palace already mentioned. Though a Hindu building that palace has yet much of what might be called the more sophisticated quality of the Indo-Saracenic work as well as some similarity of detail. It has, being Hindu, a certain amount of sculptured ornament of animated forms, and the general effect of roundness, richness and interest thereby imparted seemed eloquent in suggestion as to what is lacking in so many of the Mahometan buildings.

Foreign Influence.

There would appear to be a conflict between archæologists as to the extent of the effect on Indian art produced by foreign influence under the Mahometans. The extreme view on the one hand is to regard all the best of the art as having been due to foreign importation. The Gandharan sculptures with their Greek tendency, the development of new forms and modes of treatment to which allusion has been made, the similarities to be found between the Mahometan buildings of India and those of North Africa and Europe, the introduction of the minaret and, above all, the historical evidences that exist of the presence in India of Europeans during Mogul times, are cited in support of the theory. On the other hand those of the opposite school hold the foregoing view to be due to the prevailing European preconception that all light and leading must come by way of Europe, and the best things in art by way of Greece. To them the Gandharan sculpture, instead of being the best, is the worst in India even because of its Greek tincture. They find in the truly indigenous work beauties and significances not to be seen in the Graeco-Bactrian sculptures, and point to those of Borobudeı in Java, the work of Buddhist colonists from India, wonderfully preserved by reason of an immunity from destructive influences given by the insular position, as showing the best examples of the art extant. It is probable that a just estimate of the merits of the controversy, with respect to sculpture at any rate, cannot be formed till time has obliterated some of the differences of taste that exist between East and West.

To the adherents of the newer school the undisputed similarities between Indo-Mahometan and Hindu buildings outweigh those between Indian and Western Mahometan work, especially in the light of the dis-similarities between the latter. They admit the changes produced by the advent of Islam, but contend that the art, though modifie yet remained in its essence what it had alwa been, indigenous Indian. The minaret, t dome, the arch, they contended, though dev loped under the Moslem influence, were y so far as their detailed treatment and craft manship are concerned, rendered in a mann distinctively Indian. Fergusson is usual regarded as the leader of the former scho while the latter and comparatively rece school has at present found an eager champi in Mr. E. B. Havell, whose works, on the subje are recommended for study side by side wi those of the former writer. Mr. Havell pra tically discards Fergusson's racial method classification into styles in favour of a chron logical review of what he regards to a great extent than did his famous precursor as bei one continuous homogeneous Indian mode architectural expression, though subject variations from the influences brought to be upon it and from the varied purposes to whi it was applied.

Agra and Delhi.

Agra and Delhi may be regarded as t principal centres of the Indo-Saracenic style the former for the renowned Taj Mahal, f Akbar's deserted capital of Fatehpur Sik his tomb at Secundra, the Moti Musjid a palace buildings at the Agra fort. At Del we have the great Jumma Musjid, the For the tombs of Humayon, Sufdar Jung, &c and the unique Qutb Minar. Two other gre centres may be mentioned, because in ea there appeared certain strongly marked ind vidualities that differentiated the varieti of the style there found from the variety se at Delhi and Agra, as well as that of one fro that of the other. These are Ahmedabad Gujarat and Bijapur on the Dekhan, both the Bombay Presidency.

Ahmedabad.

At Ahmedabad with its neighbours Sirkh and Champanir there seems to be less of a depa ture from the older Hindu forms, a tendency adhere to the lintel and bracket rather than have recourse to the arch, while the dom though constantly employed, was there neve developed to its full extent as elsewhere, carried to its logical structural conclusion. Th Ahmedabad work is probably most famous fo the extraordinary beauty of its stone "jali"— or pierced lattice-work, as in the palm tre windows of the Sidi Sayyid Musjid.

Bijapur.

The characteristics of the Bijapur variet of the style are equally striking. They ar perhaps more distinctively Mahomedan tha those of the Ahmedabad buildings in tha here the dome is developed to a remarkabl degree, indeed the tomb of Mahmud—th well-known "Gol Gumbaz"—is cited as shew ing the greatest space of floor in any buildin in the world roofed by a single dome, not eve excepting the Pantheon. The lintel also wa here practically discarded in favour of the arch The Bijapur style shews a bold masculin quality and a largeness of structural concep tion that is unequalled elsewhere in India though in richness and delicacy it does no attempt to rival the work of the further North In this we recognize among other influence

hat of the prevailing material, the hard uncompromising Dekhan basalt. In a similar manner the characteristics of the Ahmedabad ork with its greater richness of ornamentation are bound up with the nature of the Gujarat eestone, while at Delhi and Agra the freer choice of materials available—the local red and white sandstones, combined with access to marble and other more costly materials—was no doubt largely responsible for the many easily recognizable characteristics of the architecture of these centres.

II. MODERN.

The modern architectural work of India ivides itself sharply into two classes. There first that of the indigenous Indian "Masteruilder" to be found chiefly in the Native tates, particularly those in Rajputana. econd there is that of British India, or of ll those parts of the peninsula wherever Vestern ideas and methods have most strongly pread their influence, chiefly, in the case of rchitecture, through the medium of the Deartment of Public Works. The work of that epartment has been much animadverted pon as being all that building should not be, ut, considering it has been produced by men f whom it was admittedly not the *metier*, and ho were necessarily contending with lack of xpert training on the one hand and with deartmental methods on the other, it must be onceded that it can shew many notable buildgs. Of recent years there has been a tendncy on the part of professional architects o turn their attention to India, and a number of hese has even been drafted into the service f Government as the result of a policy iniated in Lord Curzon's Viceroyalty. In time, herefore, and with the growth of the influence f these men, such of the reproach against he building of the British in India as was just nd was not merely thoughtlessly maintained s a corollary to the popular jape against everyhing official, may gradually be removed. If his is so as to Government work progress should e even more assured in the freer atmosphere utside of official life. Already in certain of he greater cities, where the trained modern rchitect has established himself, in private ractice, there are signs that his influence is eginning to be felt. He still complains, however, that the general public of India needs uch educating up to a recognition of his alue, both in a pecuniary sense and otherise. It is also to be observed that the surival of a relic of the popular idea of the time efore his advent, to the effect that though n architect might occasionally "design" building it was always an engineer who built , is still indicated by the architect in some ases deeming it advisable to style himself architect and engineer."

To the work of the indigenous "masteruilder" public attention has of recent years een drawn with some insistence, and the sugestion has been pressed that efforts should be irected towards devising means for the prervation of what is pointed out—and now niversally acknowledged— to be a remarkable rvival—almost the only one left in the world— f "living art," but which is threatened with radual extinction by reason of the spread of Vestern ideals and fashions. The matter ssumed some years ago the form of a mild ontroversy centring round the question of the then much discussed project of the Government of India's new capital at Delhi. It was urged that this project should be utilised to give the required impetus to Indian art rather than that it should be made a means of fostering European art which needed no such encouragement at India's expense. The advocates of this view appear for the most part to have been adherents of the "indigenous Indian" school of archæologists already mentioned, and to have based their ideas on their own reading of the past. They still muster a considerable following not only amongst the artistic public of England and India, but even within the Government services. Their opponents, holding what appears to be the more official view both as to archæology and art, have pointed to the "death" of all the arts of the past in other countries as an indication of a natural law, and deprecate as waste of energy all efforts to resist this law, or to institute what they have termed "another futile revival." The British in India they contend, should do as did the ancient Romans in every country on which they planted their conquering foot. As those were wont to replace indigenous art with that of Rome, so should we set our seal of conquest permanently on India by the erection of examples of the best of British art. This is the view which, as we have indicated, appears to have obtained for the moment the more influential hearing, and the task of designing and directing the construction of the principal buildings in the new Capital has accordingly been entrusted jointly to a London and to a South African architect, neither of whom can be unduly influenced by either past or recent architectural practice so far as India is concerned.

The results cannot but be awaited with the keenest interest, and meanwhile the controversy, with suspended judgment, naturally falls into abeyance. It is, moreover, however vital to the interests of the country's architecture, too purely technical and academic for its merits to be estimated by the general reader or discussed here. Its chief claim on our attention has in the fact that it affords an added interest to the tourist, who may see the fruits of both schools of thought in the various modern buildings of British India as well as examples of the "master builders" work in nearly every native town and bazaar. The town of Lashkar in Gwalior State may be cited as peculiarly rich in instances of picturesque modern Indian street architecture, while at Jaipur, Udaipur, Benares, etc., this class of work may be studied in many different forms both civil and religious. The extent to which the "unbroken tradition from the past" exists may there be gauged by the traveller who is architect enough for the purpose.

Archæology.

The archæological treasures of India are as varied as they are numerous. Those of the pre-Muhammadan period may roughly be divided into (1) architectural and sculptural monuments and (2) inscriptions. No building or sculpture in India with any pretentions to be considered an example of architecture or art can be ascribed to a time earlier than that of Asoka (circa 250 B.C.). In the pre-Asoka architecture of India, as in that of Burma or China at the present day, wood was solely or almost solely employed. Even at the close of the 4th century, B.C., Megasthenes, the Greek Ambassador at the court of Chandragupta, grandfather of Asoka, describes Pataliputra, the capital of the Indian monarch, as "surrounded by a wooden wall pierced with loop-holes for the discharge of arrows." If the capital itself was thus defended, we can easily infer that the architecture of the period was wooden. And long long after stone was introduced the lithic styles continued to be influenced by, or copied from, the wooden.

Monumental Pillars.—The first class of works that we have to notice are the monumental pillars, known as *lats*. The oldest are the monolithic columns of Asoka, nearly thirty in number, of which ten bear his inscriptions. Of these the Lauriya-Nandangarh column in the Champaran District, Tirhut, is practically uninjured. The capital of each column, like the shaft, was monolithic, and comprised three members, *viz.*, a Persepolitan bell, abacus, and crowning sculpture in the round. By far the best capital of Asoka's time was that exhumed at Sarnath near Benares. The four lions standing back to back on the abacus are carved with extraordinary precision and accuracy. Of the post-Asokan period one pillar (B.C. 150) stands to the north-east of Besnagar in the Gwalior State, another in front of the cave of Karli (A.D. 70), and a third at Eran in Central Provinces belonging to the 5th Century, A. D. All these are of stone; but there is one of iron also. It is near the Qutb Minar at Delhi, and an inscription on it speaks of its having been erected by a king called Chandra, identified with Chandragupta II. (A.D. 375-413) of the Gupta dynasty. It is wonderful "to find the Hindus at that age forging a bar of iron larger than any that have been forged even in Europe to a very late date, and not frequently even now." Pillars of later style are found all over the country, especially in the Madras Presidency. No less than twenty exist in the South Kanara District. A particularly elegant example faces a Jaina temple at Mudabidri, not far from Mangalore.

Topes.—*Stupas*, known as *dagabas* in Ceylon and commonly called Topes in North India, were constructed either for the safe custody of relics hidden in a chamber often near the base or to mark the scene of notable events in Buddhist or Jaina legends. Though we know that the ancient Jainas built *stupas*, no specimen of Jaina *stupas* is now extant. Of those belonging to the Buddhists, the great Tope of Sanchi in Bhopal, is the most intact and entire of its class. It consists of a low circular drum supporting a hemispherical dome of less diameter. Round the drum is an open passage for circumambulation, and the whole is enclosed by a ma sive stone railing with lofty gates facing t cardinal points. The gates are essential wooden in character, and are carved, inside an out, with elaborate sculptures. The *stupa* itse probably belonged to the time of Asoka, b as Sir John Marshall's recent explorations ha conclusively shown, the railing and the gat ways were at least 150 and 200 years later, re pectively. Other famous Buddhist *stupas* th have been found are those of Bharhut betwee Allahabad and Jubbulpore, Amravati in t Madras Presidency, and Piprahwa on the N palese frontier. The tope proper at Bharh has entirely disappeared, having been utilis for building villages, and what remained of t rail has been removed to the Calcutta Museu The bas-reliefs on this rail which contain sho inscriptions and thus enable one to identi the scenes sculptured with the *Jatakas* or Birt Stories of Buddha give it a unique valu The *stupa* at Amravati also no longer exist and portions of its rail, which is unsurpasse in point of elaboration and artistic merit, a now in the British and Madras Museums. Th *stupa* at Piprahwa was opened by Mr. W. Peppe in 1898, and a steatite or soap-stone r liquary with an inscription on it was unearthe The inscription, according to many scholar speaks of the relics being of Buddha and e shrined by his kinsmen, the Sakyas. And w have thus here one of the *stupas* that were erec ed over the ashes of Buddha immediately aft his demise.

Caves.—Of the rock excavations which a one of the wonders of India, nine-tenths belo to Western India. The most important grou of caves are situated in Bhaja Bedsa, Karl Kanheri, Junnar, and Nasik in the Bomba Presidency, Ellora and Ajanta in Nizam Dominions, Barabar 16 miles north of Gaya, an Udayagiri and Khandagiri 20 miles from Cu tack in Orissa. The caves belong to the thr principal sects into which ancient India was d vided, *viz.*, the Buddhists, Hindus and Jaina The earliest caves so far discovered are those Barabar which were excavated by Asoka an his grandson Dasaratha, and dedicated to Aj vikas, a naked sect founded by Makkhali Gosal This refutes the theory that cave arch tecture was of Buddhist origin. The next ea liest caves are those of Bhaja, Pitalkhora an cave No. 9 at Ajanta and No. 19 at Nasik. The have been assigned to 200 B.C. by Fergusson an Dr. Burgess. But there is good reason to sup pose from Sir John Marshall's recent researche and from epigraphic considerations that they a considerably more modern. The Buddhist cave are of two types—the *chaityas* or chapel cave and *viharas* or monasteries for the residence monks. The first are with vaulted roofs an horse-shoe shaped windows over the entranc and have interiors consisting of a nave and sid aisles with a small *stupa* at the inner circular end They are thus remarkably similar to Christia basilicas. The second class consist of a ha surrounded by a number of cells. In the late *viharas* there was a sanctum in the centre of th back wall containing a large image of Buddha Hardly a *chaitya* is found without one or mor *viharas* adjoining it. Of the Hindu cave tem

ples that at Elephanta near Bombay is perhaps the most frequented. It is dedicated to Siva and is not earlier than the 7th century A.D. But by far the most renowned cave-temple of the Hindus is that known as Kailasa at Ellora. It is on the model of a complete structural temple but carved out of solid rock. It also is dedicated to Siva and was excavated by the Rashtrakuta king, Krishna I, (A. D. 768), who may still be seen in the paintings in the ceilings of the upper porch of the main shrine. Of the Jaina caves the earliest are at Khandgiri and Udayagiri; those of the mediæval type, in Indra Sabha at Ellora; and those of the latest period, at Ankai in Nasik. The ceilings of many of these caves were once adorned with fresco paintings. Perhaps, the best preserved among these are those at Ajanta, which were executed at various periods between 350-650 A.D. and have elicited high praise as works of art. Copies were first made by Major Gill, but most of them perished by fire at the Crystal Palace in 1866. The lost ones were again copied by John Griffiths of the Arts School, Bombay, half of whose work was similarly destroyed by a fire at South Kensington. They were last copied by Lady Herringham during 1909-11. Her pictures, which are in full scale, are at present exhibited at the Indian Section of the Victoria and Albert Museum, South Kensington, and have been reproduced in a volume brought out by the India Society.

Gandhara Monuments.—On the north-west frontier of India, anciently known as Gandhara, are found a class of remains, ruined monasteries and buried *stupas*, among which we notice for the first time representations of Buddha and the Buddhist pantheon. The free use of Corinthian capitals, friezes of nude Erotes bearing a long garland, winged Atlantes without number, and a host of individual motifs clearly establish the influence of Hellenistic art. The mound at Peshawar, locally known as Shah-ji-ke-Dheri, which was explored in 1909, brought to light several interesting sculptures of this school together with a reliquary casket, the most remarkable bronze object of the Gandhara period. The inscription on the casket left no doubt as to the mound being the *stupa* raised over the bones of Buddha by the Indo-Scythian king Kanishka. They were presented by Lord Minto's Government to the Buddhists of Burma and are now enshrined at Mandalay. To about the same age belong the *stupas* at Manikyala in the Punjab opened by Ranjit Singh's French Generals, Ventura and Court, in 1830. Some of them contained coins of Kanishka.

Structural Temples.—Of this class we have one of the earliest examples at Sanchi, and another at Tigowa in the Central Provinces. In South India we have two more examples, *viz.*, Lad Khan and Durga temples at Aihole in Bijapur. All these belong to the early Gupta period and cannot be later than 500 A.D. The only common characteristic is flat roofs without spires of any kind. In other respects they are entirely different and already here we mark the beginning of the two styles, Indo-Aryan and Dravidian, whose differences become more and more pronounced from the 7th century onwards. In the Indo-Aryan style, the most prominent lines tend to the perpendicular, and in the Dravidian to the horizontal. The salient feature of the former again is the curvilinear steeple and of the latter, the pyramidal tower. The most notable examples of the first kind are to be found among the temples of Bhubaneswar in Orissa, Khajarah in Bundelkhand, Osia in Jodhpur, and Dilwara on Mount Abu. One of the best known groups in the Dravidian style is that of the Mamallapuram Raths, of 'Seven Pagodas', on the seashore to the south of Madras. They are each hewn out of a block of granite, and are rather models of temples than *raths*. They are the earliest examples of typical Dravidian architecture, and belong to the 7th century. To the same age has to be assigned the temple of Kailasanath at Conjeeveram, and to the following century some of the temples at Aihole and Pattadkal of the Bijapur District, Bombay Presidency, and the monolithic temple of Kailasa at Ellora, referred to above. Of the later Dravidian style the great temple at Tanjore and the Srirangam temple of Trichinopoly are the best examples.

Intermediate between these two main styles comes the architecture of the Deccan, called Chalukyan by Fergusson. In this style the plan becomes polygonal and star-shaped instead of quadrangular; and the high-storeyed spire is converted into a low pyramid in which the horizontal treatment of the Dravidian is combined with the perpendicular of the Indo-Aryan. Some fine examples of this type exist, at Dambal, Rattihali, Tilliwalli and Hangal in Dharwar, Bombay Presidency, and at Ittagi and Warangal in Nizam's Dominions. But it is in Mysore among the temples at Hallebid, Belur, and Somnathpur that the style is found in its full perfection.

Inscriptions.—We now come to inscriptions, of which numbers have been brought to light in India. They have been engraved on varieties of materials, but principally on stone and copper. The earliest of these are found incised in two distinct kinds of alphabet, known as Brahmi and Kharoshthi. The Brahmi was read from left to right, and from it have been evolved all the modern vernacular scripts of India. The Kharoshthi was written from right to left, and was a modified form of an ancient Aramaic alphabet introduced into the Punjab during the period of the Persian domination in the 5th century, B.C. It was prevalent up to the 4th century, A.D., and was supplanted by the Brahmi. The earliest dateable inscriptions are the celebrated edicts of Asoka. One group of these has been engraved on rocks, and another on pillars. They have been found from Shahbazgarhi 40 miles north-east of Peshawar to Nigliva in the Nepal Tarai, from Girnar in Kathiawar to Dhauli in Orissa, from Kalsi in the Lower Himalayas to Siddapur in Mysore, showing by the way the vast extent of territory held by him. The reference in his Rock Edicts to the five contemporary Greek Princes, Antiochus II. of Syria, Ptolemy Philadelphus, and so forth is exceedingly interesting, and fixes B.C. 269 as the date of his coronation. His Rummindei pillar inscription, again, discovered in Nepal Tarai, now settles, beyond all doubt, the birth-place of Buddha which was for long disputed. Another noteworthy record is the inscription of the Besnagar pillar. The pillar had been known for a long time, but Sir John

Marshall was the first to notice the inscription on it. It records the erection of this column, which was a Garuda pillar, in honour of the god Vasudeva by one Heliodoros, son of Dion, who is described as an envoy of King Antialkidas of Taxila. Heliodorous is herein called a *Bhagavata*, which shows that though a Greek he had become a Hindu and presumably a Vaishnava. Another inscription worth noticing and especially in this connection is that of Cave No. 10 at Nasik. The donor of this cave, Ushavadata, who calls himself a Saka and was thus an Indo-Scythian, is therein spoken of as having granted three hundred thousand kine and sixteen villages to gods and Brahmans and as having annually fed one hundred thousand Brahmans. Here is another instance of a foreigner having embraced Hinduism. Thus for the political, social, economical and religious history of India at the different periods the inscriptions are invaluable records, and are the only light but for which we are 'forlorn and blind.'

Saracenic Architecture.—This begins in India with the 13th century after the permanent occupation of the Muhammadans. Their first mosques were constructed of the materials of Hindu and Jaina temples, and sometimes with comparatively slight alterations. The mosque called *Adhai-din-ka-jhompra* at Ajmer and that near the Qutb Minar are instances of this kind. The Muhammadan architecture of India varied at different periods and under the various dynasties, imperial and local. The early Pathan architecture of Delhi was massive and at the same time was characterised by elaborate richness of ornamentation. The Qutb Minar and tombs of Altamsh and Ala-ud-din Khilji are typical examples. Of the Sharqi style we have three mosques in Jaunpur with several tombs. At Mandu in the Dhar State, a third form of Saracenic architecture sprung up, and we have here the Jami Masjid, Hoshang's tomb, Jahaz Mahall and Hindola Mahall as the most notable instances of the secular and ecclesiastical styles of the Malwa Pathans. The Muhammadans of Bengal again developed their own style, and Pandua, Malda, and Gaur teem with the ruins of the buildings of this type, the important of which are the Adina Masjid of Sikandar Shah, the Elakhi mosque, Kadam Rasul Masjid, and so forth. The Bahmani dynasty of Gulbarga and Bidar were also great builders, and adorned their capitals with important buildings. The most striking of these is the great mosque of Gulbarga, which differs from all mosques in India in having the whole central area covered over so that what in others would be an open court is here roofed by sixty-three small domes. "Of the various forms which the Saracenic architecture assumed," says Fergusson, "that of Ahmedabad may probably be considered to be the most elegant." It is notable for its carved stone work; and the work of the perforated stone windows in Sidi Sayyid's mosque, the carved niches of the minars of many other mosques, the sculptured *Mihrabs* and domed and panelled roofs is so exquisite that it will rival anything of the sort executed elsewhere at any period. No other style is so essentially Hindu. In complete contrast with this was the form of architecture employed by the Adil Shahi dynasty of Bijapur. There is here relatively little trace of Hindu forms or details. The principal buildings now left at Bijapur are the Jami Masjid, Gagan Mahall, Mihtar Mahall, Ibrahim Rauza and mosque and the Gol Gumbaz. Like their predecessors, the Pathans of Delhi, the Moghuls were a great building race. Their style first began to evolve itself during the reign of Akbar in a combination of Hindu and Muhammadan features. Noteworthy among the emperor's buildings are the tomb of Humayun, and the palaces at Fatehpur, Sikri and Agra. Of Jehangir's time his mosque at Lahore and the tomb of Itimad-ud-daula are the most typical structures. "The force and originality of the style gave way under Shah Jahan to a delicate elegance and refinement of detail." And it was during his reign that the most splendid of the Moghul tombs, the Taj Mahal at Agra, the tomb of his wife Mumtaz Mahall, was constructed. The Moti Masjid in Agra Fort is another surpassingly pure and elegant monument of his time.

Archæological Department.—As the archæological monuments of India must attract the attention of all intelligent visitors, they would naturally feel desirous to know something of the Archæological Department. The work of this Department is primarily two-fold, conservation, and research and exploration. None but spasmodic efforts appear to have been made by Government in these directions till 1870 when they established the Archæological Survey of India and entrusted it to General (afterwards Sir) Alexander Cunningham, who was also the first Director-General of Archæology. The next advance was the initiation of the local Surveys in Bombay and Madras three years after. The work of these Surveys, however, was restricted to antiquarian research and description of monuments, and the task of conserving old buildings was left to the fitful efforts of the local Governments, often without expert guidance or control. It was only in 1878 that the Government of India under Lord Lytton awoke to this deplorable condition, and sanctioned a sum of 3¾ lakhs to the repair of monuments in United Provinces, and soon after appointed a conservator, Major Cole, who did useful work for three years. Then a reaction set in, and his post and that of the Director-General were abolished. The first systematic step towards recognising official responsibility in conservation matters was taken by Lord Curzon's Government, who established the seven Archæological Circles that now obtain, placed them on a permanent footing, and united them together under the control of a Director-General, provision being also made for subsidising local Governments out of imperial funds, when necessary. The Ancient Monuments Preservation Act was passed for the protection of historic monuments and relics especially in private possession and also for State control over the excavation of ancient sites and traffic in antiquities. Under the direction of Sir John Marshall, Kt., C.I.E., Director-General of Archæology, a comprehensive and systematic campaign of repair has been prosecuted, and the result of it is manifest in the present altered conditions of old buildings. One has only to see for example the Moghul buildings at Agra, Delhi, Lahore and Ajmer, in order to be convinced how the work of careful reconstruc-

tion and repair has converted these decayed and desecrated monuments with their modern excrescences into edifices of unrivalled loveliness. Another noteworthy feature of this work has been the rescue of many of these buildings from profane and sacrilegious uses. It is well-known that the superb Pearl Mosque of Jahangir in the Lahore Fort contained a Government treasury, and the Sleeping Hall of Shah Jahan served as a Church for the British troops. At Bijapur two mosques have been recovered, one of which was used as Dak Bungalow and the other as Post Office. The local Kutcherry has now been expelled from the lovely musjid of Sidi Sayyid at Ahmedabad. The Cave temples at Trichinopoly are no longer godowns. Nor has research work been in any way neglected under the new order of things. A unique feature of it for the first time introduced under the guidance and advice of Sir John Marshall has been the scientific excavation of buried sites, such as Sarnath where Buddha preached his first sermon, Kasia or Kusinara where he died, Saheth-Maheth the ancient Srasvasti, Taxila or Takshasila, the seat of the ancient Hindu University, Patna or Pataliputra, the Mauryan capital, Besnagar or the ancient Vidisa, and so forth. The results achieved, especially at the last three places, are of a sensational character. At Taxila Sir John has brought to light the remains of a palace of the Assyrian style and a massive and imposing temple dedicated to Zoroastrian worship and resembling a Greek peripteral temple with the addition of a solid tower of the Likkurat type rising behind the shrine. At Patna Dr. D. B. Spooner has found traces of a Mauryan palace which is an actual replica of the Achæmenian palace at Persepolis. At Besnagar Mr. D. R. Bhandarkar has excavated a temple of Vasudeva of the third century B.C., which proves to be the oldest of all Hindu shrines in India. Among other results of this excavation is the noteworthy discovery that the art of forging steel was practised in India more than two thousand years ago and that mortar was used in the construction of brick masonry at least as early as the third century B.C.

Indian Art.

Within the last few years there has been a most interesting and promising, though somewhat narrowly confined, revival in Indian Art. For this, it is to be feared, scant credit is due to British educational policy in India, though the impetus has come mainly from a few British and other European enthusiasts who have reminded cultured India of the value of its ancient artistic heritage and indicated the possibilities of revival. Each year between 6,000 and 7,000 students pass the various examinations of the four Schools of Arts maintained by the State, but until very recently those institutions have been in some respects seriously mistaken in ideal and method. Viewing their work over half a century it may be said broadly that they have paid very inadequate attention to the traditions of Indian Art, and that in consciously or unconsciously encouraging Western influences, which the Indian student could not thoroughly assimilate, they have not even been particular to choose good examples of Western art. Nor have the Schools of Arts been altogether free from the taint of commercialism; indeed, for some years one of them was in effect something between an industrial workshop and an emporium for selling Indian curiosities nicely designed to meet the taste of tourists. In justice to the Schools it should be added that they have seldom been able to attract into them members of the hereditary craftsmen class. The material they have had to work with has been unpromising. Further, even for students who might attain to conspicuous skill, there have been few openings in after-life. All this is now changing, but the improvement began only some fifteen years ago, and it is mainly due to agencies more or less independent of the schools.

A Notable Revival.

The revival which has already produced one notable artist, Mr. Abanindranath Tagore, is the direct outcome of the study of the work of the best periods of Indian art. In order to comprehend it, it is therefore necessary to glance back over the history of art in India. With sculpture we are here not particularly concerned, for there is no perceptible revival in it at present; but it may be said in passing that its golden age in India was the period which produced the sculptures of Ellora and Elephanta, that in its finest examples this art was genuinely Indian, for the Gandhara sculptures, which show strong Greek influence, are inferior enough to make the contention that India owed much to Greece absurd, and that perhaps the finest "Indian" sculpture is to be found in Java, where at Borobudur, in the eighth and ninth centuries A.D. the descendants of Indian emigrants wrought a long series of mighty masterpieces. As regards paintings, we begin with those at Ajanta, produced at intervals between the first century before Christ and perhaps the seventh century of the Christian era. A typical example, in which a mother and her child supplicating Buddha are presented not only with much technical skill but with tenderness of feeling, may be found reproduced in Griffith's book on Ajanta and in Mr. Havell's "Indian Sculpture and Painting." These paintings are true frescoes, differing in method from the Italian in little but the use of mechanical as well as chemical combination of colours.

Practically all the work of this time has perished, and of the secular art of the period before the Moguls there is scant vestige. With the Moguls for the first time painting becomes frankly secular. Whereas a Hindu philosopher had laid it down that it was iniquitous to represent natural objects when the divinities could be made the artist's subjects, the Islamic dislike of idolatry naturally conduced to the development of secular painting. These Mogul artists were Persian sor others, more

or less under the influence of the Persian school. Akbar patronised them liberally, and Abul Fazl, his histriographer, records the triumphs of Mir Sayyid Ali, a Persian, and Daswanth, a Hindu of humble origin, whose life, darkened by insanity, ended by suicide. The work of these and their fellows is notable for minute finish, but it is stiff, and in colour often crude.

Moghul Painting.

It was in the reign of Jehangir (1605-1628) that Mogul painting reached its highest level, and it is to that period that the Indian painters of to-day and to-morrow must look for the best models for all work of theirs which is not inspired by Hindu philosophy or religion. The Emperor was himself a consummate connoisseur, capable, it is recorded, of discriminating unerringly between the work of the artists of the same school. Sherif Khan, Mansur and Abdul Hassan, the chief artists of his time, were by him highly honoured; the last, in fact, owed his training as well as distinctions and rewards to the Emperor. These and several other painters of the period excelled in portrait-miniatures, of which happily, in consequence of the practice of rolling up paintings like MSS. and only occasionally exhibiting them to view, we have many examples in good condition. These artists are markedly superior to their predecessors' influency and grace of line and show that they benefited by the closer observation of natural facts inculcated from about 1600 onwards. Many of the outline drawings, done with lampblack over a preliminary sketch faintly carried out with a fine brush dipped in Indian red, are of exquisite quality. It is noteworthy that, though in some cases landscape is well rendered as a mere background, there are no examples in Indian painting of the classic age of pure landscape: here the Indian painter of to-day has to develop an ideal with hardly any suggestion from predecessors. The puritanical and bigoted Aurangzeb was naturally hostile to art, and by the middle of the eighteenth century all the glory had departed from Indian painting, though a measure of skill in traditional methods long survived and for a time was not unappreciated by Englishmen in India. By the early years of the nineteenth century, however, Indian painting had virtually ceased to exist. At length a painter arose, to be much admired by the worst judges among those Indians whose Western education had made them indifferent to indigenous art without giving them any real interest in European art. This man, Ravi Varma, depicted Indian legends as if he were painting figures in amateur tableaux; of Indian art traditions there is not a trace in his work, which is theatrical, sentimental and of poor quality technically. There have been others who have more successfully assimilated something of Western ideas of art, but their work is without interest, except in so far as it exhibits a deplorable submissiveness to second-rate Western teaching. The movement of to-day which arouses high expectations is that in which Mr. Abanindranath Tagore is the leader. This artist, member of a Bengali family, noted for culture and cousin of the poet Rabindranath Tagore, has made a close and most profitable study of the work of the Mogul and other painters of India, but he has seen in the examples of their work not something to be slavishly copied but certain principles which he applies freshly, in his own way. He has imagination, a sense of composition, a delicate sense of colour and much, though as yet perhaps not quite secure, command of the technical resources of his art. Above all, he is sincere; nowhere is there in his work any deliberate exploitation of the fact that he is an Eastern artist who must at all costs exhibit National ism in his painting. One of his pictures representing the spirits of the air, is justly famous, and his admirable illustrations to Omar Khayyam, issued by the *Studio*, have found appreciation in England as well as in India. Among those more or less associated with this painter, who as Vice-Principal of the Calcutta School of Art, is exercising a strong influence within narrow limits, may be mentioned Mr. Surendranath Ganguly and Mr. Nanda Lall Bose, the latter of whom has a vein of true poetic feeling and both of whom work in intelligent but not abject obedience of the old tradition of Indian painting. If there is no fourth name at present to put besides those mentioned, there is every reason to believe there soon will be several.

Modern Interest.

At the present time there is a marked development of interest among educated Indians in arts indigenous to their country, but it must be recognised that there is little real knowledge and taste in the public to which the Indian artist of to-day has to address himself. Work is esteemed rather as proof of Indian capacity than for its strict artistic merits. Among those Indians and Europeans who have devoted special attention to the matter there is an unfortunate tendency to exaggerate the value of old Indian art and thus to encourage the belief that the Indian artist of to-day can find no higher task than the repetition of old and narrow conventions. It is perfectly true that we must accept the convention of any art without *a priori* objections, but it by no means follows that one convention is as good as another. The question arises what limits a convention sets on those working within it, and it is plain that the conventions of Indian art have compelled the exclusion of a vast amount of the Western painter's best material. On the other hand, it should be recognised that his traditions have made it almost impossible for the Indian artist to fall into the common Western error of taking a mere representation of fact to be the aim of art. It is most desirable that the Indian artist of today should revive the old traditions; that he should be genuinely Indian, but it is not desirable that he should needlessly cramp himself because certain enthusiasts assure him that the defects and limitations of classic Indian art are positive merits. The Indian artist has a vast treasure of religious and philosophical matter to draw upon for such subjects as are most congenial to the Hindu genius, and he has the whole range of Indian life to observe and create over again. There is no occasion for an unwise asceticism on the ground that ancient conventions ruled out most of the material.

Manners and Customs.

Next to the complexion of the people, which varies from fair to black, the tourist's attention in India is drawn by their dress and personal decoration. In its simplest form a Hindu's dress consists of a piece of cloth round the loins. Many an ascetic, who regards dress as a luxury, wears nothing more, and he would dispense with even so much if the police allowed him to. The Mahomedan always covers his legs, generally with trousers, sometimes with a piece of cloth tied round the waist and reaching to the ankles. Hill men and women, who at one time wore a few leaves before and behind and were totally innocent of clothing, do not appear to-day within the precincts of civilisation and will not meet the tourist's eye. Children, either absolutely nude or with a piece of metal hanging from the waist in front, may be seen in the streets in the most advanced cities, and in the homes of the rich. The child Krishna, with all the jewels on his person is nude in his pictures and images.

Dress.—The next stage in the evolution of the Hindu dress brings the loincloth nearly down to the feet. On the Malabar coast, as in Burma, the ends are left loose in front. In the greater part of India, they are tucked up behind—a fashion which is supposed to befit the warrior, or one end is gathered up in folds before and the other tucked up behind. The simplest dress for the trunk is a scarf thrown over the left shoulder, or round both the shoulders like a Roman toga. Under this garment is often worn a coat or a shirt. When an Indian appears in his full indigenous dress, he wears a long robe, reaching at least down to the calves: the sleeves may be wide, or long and sometimes puckered from the wrist to the elbow. Before Europeans introduced buttons, a coat was fastened by ribbons, and the fashion is not obsolete. The Mahomedan prefers to button his coat to the left, the Hindu to the right. A shawl is tied round the waist over the long coat, and serves as a belt, in which one may carry money or a weapon, if allowed. The greatest variety is shown in the headdress. More than seventy shapes of caps, hats, and turbans, may be seen in the city of Bombay. In the Punjab and the United Provinces, in Bengal, in Burma and in Madras other varieties prevail. Cones and cylinders, domes and truncated pyramids, high and low, with sides at different angles: folded brims, projecting brims: long strips of cloth wound round the head or the cap in all possible ways, ingenuity culminating perhaps in the "parrot's beak" of the Maratha turban—all these fashions have been evolved by different communities and in different places, so that a trained eye can tell from the head-covering whether the wearer is a Hindu, Mahomedan or Parsi, and whether he hails from Poona or Dharwar, Ahmedabad or Bhavnagar.

Fashion Variations.—Fashions often vary with climate and occupation. The Bombay fisherman may wear a short coat and a cap, and may carry a watch in his pocket; yet, as he must work for long hours in water; he would not cover his legs, but suspend only a coloured handkerchief from his waist in front. The Pathan of the cold north-west affects loose baggy trousers, a tall head-dress befitting his stature and covers his ears with its folds as if to keep off cold. The poorer people in Bengal and Madras do not cover their heads, except when they work in the sun or must appear respectable. Many well-to-do Indians wear European dress at the present day, or a compromise between the Indian and European costumes, notably the Indian Christians and Parsis. Most Parsis however have retained their own headdress, and many have not borrowed the European collar and cuffs. The majority of the people do not use shoes: those who can afford them wear sandals, slippers and shoes, and a few cover their feet with stockings and boots after the European fashion in public.

Women's Costumes.—The usual dress of a woman consists of a long piece of cloth tied round the waist, with folds in front, and one end brought over the shoulder or the head. The folds are sometimes drawn in and tucked up behind. In the greater part of India women wear a bodice: on the Malabar coast many do not, but merely throw a piece of cloth over the breast. In some communities petticoats, or drawers, or both are worn. Many Mussalman ladies wear gowns and scarfs over them. The vast majority of Mahomedan women are *gosha*, and their dress and persons are hidden by a veil when they appear in public: a few converts from Hinduism have not borrowed the custom. In Northern India Hindu women have generally adopted the Mussalman practice of seclusion. In the Dekhan and in Southern India they have not.

As a rule the hair is daily oiled, combed, parted in the middle of the head, plaited and rolled into a chignon, by most women. Among high caste Hindu widows sometimes shave their heads in imitation of certain ascetics, or monks and nuns. Hindu men do not, as a rule, completely shave their heads, Mahomedans in most cases do. The former generally remove the hair from a part of the head in front, over the temples, and near the neck, and grow it in the centre, the quantity grown depending upon the fancy of the individual. Nowadays many keep the hair cropped in the European fashion, which is also followed by Parsis and Indian Christians. Most Mussalmans grow beards, most Hindus do not, except in Bengal and elsewhere, where the Mahomedan influence was paramount in the past. Parsis and Christians follow their individual inclinations. Hindu ascetics, known as Sadhus or Bairagis as distinguished from Sanyasis, do not clip their hair, and generally coil the uncombed hair of the head into a crest, in imitation of the god Shiva.

Hindu women wear more ornaments than others of the corresponding grade in society. Ornaments bedeck the head, the ears, the nose, the neck, the arms, wrists, fingers, the waist—until motherhood is attained, and by some even later—and the toes. Children wear anklets. Each community affects its peculiar ornaments, though imitation is not uncommon. Serpents with several heads, and flowers, like the lotus, the rose, and the champaka, are among the most popular object of representation in gold or silver.

Caste Marks.—Caste marks constitute a mode of personal decoration peculiar to Hindus, especially of the higher castes. The simplest mark is a round spot on the forehead It represents prosperity or joy, and is omitted in mourning and on fast-days. It may be red, or yellowish as when it is made with ground sandalwood paste. The worshippers of Vishnu draw a vertical line across the spot, and as Lakshmi is the goddess of prosperity, it is said to represent her. A more elaborate mark on the forehead has the shape of U or V, generally with the central line, sometimes without it, and represents Vishnu's foot. The worshippers of Shiva adopt horizontal lines, made with sandalwood paste or ashes. Some Vaishnavas stamp their temples, near the corners of the eyes, with figures of Vishnu's conch and disc. Other parts of the body are also similarly marked. The material used is a kind of yellowish clay. To smear the arms and the chest with sandalwood paste is a favourite kind of toilet, especially in the hot season. Beads of Tulsi or sacred Basil, and berries of Rudraksha *elæocarpus ganitrus*, strung together are worn round their necks by Vaishnavas and Shaivas, respectively. The Lingayats, a Shaiva sect, suspend from their necks a metallic casket containing the Linga or phallus of their god. Bairagis, ascetics, besides wearing Rudraksha rosaries round their necks and matted hair, smear their bodies with ashes. Religious mendicants suspend from their necks figures of the gods in whose name they beg. Strings of cowries may also be seen round their necks. Muslim dervishes sometimes carry peacock's feathers.

Hindu women mark their foreheads with a red spot or horizontal line. High caste widows are forbidden to exhibit this sign of happiness, as also to deck themselves with flowers or ornaments. Flowers are worn in the chignon. Hindu women smear their faces, arms, and feet sometimes with a paste of turmeric, so that they may shine like gold. The choice of the same colour for different purposes cannot always be explained in the same way. The red liquid with which the evil eye is averted may be a substitute for the blood of the animal slaughtered for the purpose in former times. In many other cases this colour has no such associations. The Muslim dervish affects green, the Sikh Akali is fond of blue, the Sanyasi adopts orange for his robe, and no reason can be assigned with any degree of certainty.

Shiva.—India is a land of temples, mosques and shrines, and the Hindu finds at every turn some supernatural power to be appeased. Shiva has the largest number of worshippers. He has three eyes, one in his forehead, a moon's crescent in his matted hair, and at the top of the coil a woman's face representing the river Ganges. His abode is the Mount Kailas in the Himalayas, from which the river takes its source. Round his neck and about his ears and limbs are serpents, and he also wears a necklace of skulls. In his hands are several weapons, especially a trident, a bow, and a thunderbolt, and also a drum which he sounds while dancing for he is very fond of this exercise. He sits on a tiger's skin, and his vehicle is a white bull. His wife Parvati and his son Ganesha sit on his thighs. An esoteric meaning is attached to every part of his physical personality. The three eyes denote an insight into the past, present and future: the moon, the serpents, and the skulls denote months, years and cycles, for Shiva is a personification of time, the great destroyer. He is also worshipped as a Linga or phallus which represents creative energy.

Ganpat.—Ganesh or Ganpati, the controller of all powers of evil subject to Shiva, is worshipped by all sects throughout India. Every undertaking is begun with a prayer to him. He has the head of an elephant, a large abdomen, serpents about his waist and wrists, several weapons in his hands, and a piece of his tusk in one hand. He is said to have broken it off when he wanted to attack the moon for ridiculing him. The different parts of his body are also esoterically explained. His vehicle is a rat.

Parvati.—Parvati, the female energy of Shiva, is worshipped under various names and forms. She is at the head of all female supernatural powers, many of whom are her own manifestations. Some are benign and beautiful, others terrible and ugly. Kali, the tutelary deity of Kalighat or Calcutta, is one of her fierce manifestations. In this form she is black: a tongue smeared with blood projects from her gaping mouth: besides her weapons, she carries corpses in her hands, and round her neck are skulls. Bombay also takes its name from a goddess, Mumbadevi. Gouri, to whom offerings are made in Indian homes at an annual festival, is benign. On the other hand the epidemic diseases like the plague and small-pox are caused by certain goddesses or "mothers."

Vishnu, the second member of the Hindu trinity, is the most popular deity next to Shiva. He is worshipped through his several incarnations as well as his original personality. His home is the ocean of milk, where he reclines on the coils of a huge, many-headed serpent. At his feet sits Lakshmi, shampooing his legs. From his navel issues a lotus, on which is seated Brahma, the third member of the trinity. In his hands are the conch, which he blows on the battlefield, and the disc, with which the heads of his enemies are severed. Round his neck are garlands of leaves and flowers, and on his breast are shining jewels. As Shiva represents destruction, Vishnu represents protection, and his son is the god of love. To carry on the work of protection, he incarnates himself from time to time, and more temples are dedicated nowadays to his most popular incarnations, Rama and Krishna, than to his original personality. Rama is a human figure, with a bow in one of his hands. He is always accompanied by his wife Sita, often by his brother Lakshmana, and at his feet, or standing before him with joined hands, is Hanuman, the monkey chieftain, who assisted him in his expedition against Ravana, the abductor of his wife. Krishna is also a human figure, generally represented as playing on a flute, with which he charmed the damsels of his city, esoterically explained to mean his devotees.

Brahma is seldom worshipped: only a couple of temples dedicated to him have yet been discovered in all India.

Minor Deities.—The minor gods and goddesses and the deified heroes and heroines who fill the Hindu pantheon, and to whom shrines are erected and worship is offered, constitute a legion. Many of them enjoy a local reputation, are unknown to sacred literature, and are worshipped chiefly by the lower classes. Some of them, though not mentioned in ancient literature, are celebrated in the works of modern saints.

The **Jains** in their temples, adore the sacred personages who founded and developed their sect, and venerate some of the deities common to Hinduism. But their view of Divinity is different from the Hindu conception, and in the opinion of Hindu theologians they are atheists. So also the **Buddhists** of Burma pay almost the same veneration to Prince Siddhartha as if he was a god, and indeed elevate him above the Hindu gods, but from the Hindu standpoint they are also atheists.

Images.—Besides invisible powers and deified persons, the Hindus venerate certain animals, trees and inanimate objects. This veneration must have originated in gratitude, fear, wonder, and belief in spirits as the cause of all good or harm. Some of the animals are vehicles of certain gods and goddesses—the eagle of Vishnu: the swan of Brahma: the peacock of Saraswati: Hanuman, the monkey, of Rama: one serpent upholds the earth, another makes Vishnu's bed: elephants support the ends of the universe, besides one such animal being Indra's vehicle: the goddess Durga or Kali rides on a tiger: one of Vishnu's incarnations was partly man and partly lion. The cow is a useful animal: to the Brahman vegetarian her milk is indispensable, and he treats her as his mother. So did the Rishi of old, who often subsisted on milk and fruits and roots. To the agriculturist cattle are indispensable. The snake excites fear. Stones, on which the image of a serpent is carved, may be seen under many trees by the roadside. The principal trees and plants worshipped are the Sacred Fig or Pipal, the Banyan, the Sacred Basil, the Bilva or Wood Apple, the Asoka, and the Acacia. They are in one way or another associated with some deity. The sun, the moon, and certain planets are among the heavenly bodies venerated. The ocean and certain great rivers are held sacred. Certain mountains, perhaps because they are the abodes of gods and Rishis, are holy. Pebbles from the Gandaki and the Narmada, which have curious lines upon them, are worshipped in many households and temples.

Worship.—Without going into a temple, one can get a fair idea of image worship by seeing how a serpent-stone is treated under a tree. It is washed, smeared with sandal, decorated with flowers: food in a vessel is placed before it, lamps are waved, and the worshipper goes round it, and bows down his head, or prostrates himself before the image. In a temple larger bells are used than the small ones that are brought to such a place: jewels are placed on the idol: and the offerings are on a larger scale. Idols are carried in public procession in palanquins or cars. The lower classes sacrifice animals before their gods and goddesses.

Domestic Life.—Of the daily domestic life of the people a tourist cannot see much. He may see a marriage or funeral procession. In the former he may notice how a bridegroom or bride is decorated: the latter may shock him, for a Hindu dead body is generally carried on a few pieces of bamboo lashed together: a thin cloth is thrown over it and the body is tied to the frame. The Mahomedan bier is more decent, and resembles the Christian coffin. Some Hindus, however, carry the dead to the burial ground in a palanquin with great pomp. The higher castes cremate the dead: others bury them. Burial is also the custom of the Muslims, and the Parsis expose the dead in Towers of Silence.

Indian Names.

The personal name of most Hindus denotes a material object, colour, or quality, an animal, a relationship, or a deity. The uneducated man, who cannot correctly pronounce long Sanskrit words, is content to call his child, father, brother, uncle, or mother, or sister, as the case may be. This practice survives among the higher classes as well. Appa Saheb, Anna Rao, Babaji, Bapu Lal, Bhai Shankar, Tatacharya, Jijibhai, are names of this description, with honorific titles added. It is possible that in early society the belief in the re-birth of departed kinsmen lent popularity to this practice. Nothing could be more natural than to call a man white, black, or red: gold or silver: gem, diamond, ruby, pearl, or merely a stone: small or tall, weak or strong: a lion, a snake, a parrot, or a dog: and to name a woman after a flower or a creeper. Thus, to take a few names from the epics, Pandu means white, and so does Arjuna: Krishna black; Bhima terrible: Nakula a mongoose: Shunaka a dog: Shuka a parrot: Shringa a horn. Among the names prevalent at the present day Hira is a diamond: Ratna or Ratan a jewel: Sonu or Chinna gold: Velli or Belli, in the Dravidian languages, means white metal or silver. Men are often called after the days of the week on which they were born, and hence they bear the names of the seven heavenly bodies concerned. When they begin to assume the names of the Hindu deities, they practically enter upon a new stage of civilisation. It is doubtful whether the Animists ever venture to assume the names of the dreaded spirits worshipped by them. To pronounce the name of a devil is to invite him to do harm. If the spirits sometimes bear the names of human beings, the reason seems to be that they were originally human.

High-caste practices.—The high caste Hindu, on the other hand, believes that the more often the name of a deity is on his lips, the more merit he earns. Therefore he deliberately names his children after his gods and goddesses, so that he may have the opportunity of pronouncing the holy names as frequently as possible. These are also sonorous and picturesque. Shiva is happy: Vishnu is a pervader: Govinda is the cowherd Krishna: Keshava has fine hair: Rama is a delighter: Lakshmana is lucky: Narayana produced the first living being on the primeval waters: Ganesha is the Lord of Shiva's hosts: Dinakara is the luminary that makes the day: Subrahmanya is a brother of Ganesha. Sita is a furrow: Saitri a ray of light: Tara a star: Radha prosperity: Rukmini is she of golden ornaments: Bhama of the glowing heart. Shiva and Vishnu has each got at least a thousand names, and they may be freely drawn upon and paraphrased in naming one's children; and the whole Hindu pantheon is as crowded as it is large. When a mother loses several children, she begins to suspect that some evil spirit has conspired against her and in order to make her off-spring unattractive to the powers of darkness, she gives them ugly names, such as Keru, rubbish, or Ukirda, dunghill, or Martoba, the mortal. Women are named after rivers, as Sarasvati, Ganga, Bhagirathi, Godavari, or Kaveri, just as men are sometimes called after mountains. Manu counsels young men not to choose a wife with such a name, perhaps because a river is an emblem of deviousness and inconstancy, as a hill is an emblem of stability. But the names of rivers have not been discarded. The Burmans have a curious custom: if a child is born on a Monday, its name must begin with a guttural, on Tuesday with a palatal, on Thursday with a labial, on Saturday with a dental.

Family names.—When a person rises in importance, he adds to his personal name a family or caste name. It was once the rule that the title Sharma might be added to a Brahman's name, Varma to a Kshatriya's, Gupta to a Vaishyas, and Dasa to a Shudra's. This rule is fairly well observed in the case of the first two titles, but the meaning of the other two has changed. Dasa means a slave or servant, and the proudest Brahman cannot disdain to call himself the servant of some god. Thus, although Kalidas, the famous poet, was a Shudra, Ramadas, the famous guru of Shivaji, was a Brahmin. The Vaishnavas have made this fashion of calling oneself a servant of some god exceedingly popular, and in Western India high caste Hindus of this sect very commonly add Das to their names. The Brahmans of Southern India add Aiyer or Aiyangar to their names. Shastri, Acharya, Bhat, Bhattacharya, Upadhyaya, Mukhopadhyaya, changed in Bengal into Mukerji, are among the titles indicative of the Brahmanical profession of studying and teaching the sacred books. Among warlike classes, like the Rajputs and Sikhs, the title Singh (lion) has become more popular than the ancient Varma. The Sindhi Mal, as in Gidumal, means brave and has the same force. Raja, changed into Raya, Rao and Rai was a political title, and is not confined to any caste. The Bengali family names, like Bose and Ghose, Dutt and Mitra, Sen and Guha, enable one to identify the caste of their bearers, because the caste of a family or clan cannot be changed. Shet, chief of a guild or a town, becomes Chetty, a Vaishya title, in Southern India. Mudaliyar and Nayudu, meaning leaders, are titles which were assumed by castes of political importance under native rulers. Nayar and Menon are the titles of important castes in Malabar. Ram, Lal, Nand, Chand, are among the additions made to personal names in Northern India. Suffixes like Ji, as in Ramji or Jamshedji, the Kanarese Appa, the Telugu Garu, the feminine Bai or Devi, are honorific. Prefixes like Babu, Baba, Lala, Sodhi, Pandit, Raja, and the Burmese Maung are also honorific.

Professional names.—Family names sometimes denote a profession: in some cases they might have been conferred by the old rulers. Mehta, Kulkarni, Deshpande, Chitnavis, Mahalnavis are the names of offices held in former times. One family name may mean a flour seller, another a cane-seller, and a third a liquor-seller. To insert the father's name between one's personal and the family name is a common practice in Western India. It is rare elsewhere. When a family comes from a certain place, the suffix 'kar' or 'wallah' is added to the name of the place and it makes a family surname in Western India. Thus we may have Chiplunkars and Suratwallahs, or without these affixes we may have Bhavnagris, Malabaris and Bilimorias, as among Parsis. Thus Vasudev Pandurang Chiplunkar would be a Hindu, whose personal name is Vasudev, father's name Pandurang, and family name derived from the village of Chiplun, is Chiplunkar. In Southern India the village name precedes the personal name. The evolution of Musalman names follows the same lines as Hindu names. But Muslims have no god or goddesses, and their names are derived from their religious and secular history. These names and titles are often as long and picturesque as Hindu appellations. The agnomens Baksh, Din, Ghulam, Khwaje, Fakir, Kazi, Munshi, Sheikh, Syed, Begum, Bibi and others, as well as honorific additions like Khan, have meanings which throw light of Muslim customs and institutions. The Parsis also have no gods and goddesses, and their personal names are generally borrowed from their sacred and secular history. Their surnames frequently indicate a profession or a place, as in the case of Hindus in Western India. Batliwallah, Readymoney, Contractor, Saklatwallah, Adenwallah and others like them are tell-tale names.

Conversions.—As a rule, a child is named soon after it is born, and in the case of males the appellation is not changed. The higher Hindu castes have a separate ceremony called the name-giving ceremony performed on the twelfth day after birth. When a girl is married in these castes, the husband's family give her a new personal name. When a boy is invested with the sacred thread and is made a twice-born, his name is not changed, but when a man joins an order of ascetics, his lay name is dropped, and he assumes a new name. So also when a Burman joins an order of monks or nuns, the lay name is superseded by a Pali name. Christian converts change their original name when they are baptised.

Routes between India and Europe.

The War from its outset completely altered the sailing programmes of all steamship lines maintaining services between India and Europe and the taking over of all vessels by the Shipping Controller upset the programmes altogether.

The Indian port for the direct journey to and from Europe is Bombay. There are ordinarily six lines of steamers by which the journey to and from the West *via* Bombay can be performed, either by sea all the way, or—and in some cases only—by sea part of the way and by rail across Europe. They are the P. & O., the Anchor Line, the City and Hall Line, and the Marittima Italiana (Italian Mail S. N. Co.). The British India line also, in pre-War days, had an occasional service to London. The Natal line steamers were available for Western passages only, the steamers sailing round the Cape on their Eastward voyages. There are ordinarily other services between Calcutta and the West, by steamers sailing round Ceylon, and several lines connect Colombo with Europe. Of the latter the Orient, † the Messageries Maritimes (which also sailed from Bombay at fortnightly intervals before the War) and the Bibby Lines are the chief, besides the P. & O. The Bibby service extends to Rangoon. The new railway between India and Ceylon greatly increases the importance of the Colombo route for Southern India. The shortest time between London and Bombay is 14 days.

Fares by P. & O. S. N. Co., which at the time of writing is the only line still running, have been considerably increased during the war and the charges for a single ticket, Bombay to London, are as follow (December, 1918) :—

First class :—A, Rs. 1,275 ; B, Rs. 1,185 ; C, Rs. 1,095.

Second class :—A, Rs. 900 ; B, Rs. 810.

Indian Train Service.

The distances and railway fares from Bombay to the principal centres of other parts of India are as follows, the trains now running considerably more slowly (for economy's sake) than in normal times :—

——	Miles.	1st Class.	2nd Class
		Rs. a.	Rs. a.
Delhi, B. B. & C. I. Railway, *via* new Nagda-Muttra direct route	865 (27½ hours)	81 2	40 9
Delhi, G. I. P. Railway, *via* Agra	957 (30½ hours)	81 2	40 9
Simla, *via* Delhi	1,137	118 3	60 1
Calcutta, G.I.P. from Bombay, *via* Jubbulpore & Allahabad..	1,349	113 3½	56 10½
Calcutta, G. I. P. from Bombay, *via* Nagpur	1,223	105 3½	52 10½
Madras, G. I. P. from Bombay, *via* Raichur	794	74 8	37 3
Lahore, *via* Delhi	1,162	109 0	54 8

THE SUEZ CANAL.

The annual report of the **Suez Canal Company** published in May, 1918, states that the general maritime movement in 1917 was 2,353 transits, representing a net total tonnage of 8,368,918, a diminution of 757 transits and 3,956,429 tons, or 32.10 per cent., as against 1916, and a diminution of 2,732 passages and 11,564,963 tons, or 58.23 per cent., as against the last normal year, 1913. During 1917 the special movement of Government ships and freighters, whose dues were paid by the Governments, represented 1,402 transits, or 4,607,279 tons. This is more than half the general traffic of the year, being 55.05 per cent. The report points out that the raising of dues during 1917 has to some extent compensated for the effects of diminished traffic.

The **dues** which the Canal Company was authorised to charge by its concession of 1856 were 10 francs a ton, charged on the gross register tonnage. To these objections were soon raised and as the result of an international Conference at Constantinople in 1873 the dues were fixed at 10 francs per net register ton with a surtax of 4 francs—afterwards reduced to 3. British shipowners still found the dues excessive and a meeting of their representatives and those of the Canal Company in 1883 agreed that in 1885 the dues should be reduced to 9½ francs a ton, that subsequently they should be lowered on a sliding scale as the canal dividend increased, and that after the dividend reached 25 per cent. all the surplus profits

† The Orient Line after the outbreak of the War began running their steamers *via* the Cape omitting the call at Colombo both Homeward and Outward.

should be applied in reducing the rates until they were lowered to 5 francs a ton. Under this arrangement dues were fixed at 7¾ francs per ton at the beginning of 1906, and at the outbreak of war were as low as 6½ francs a ton, where they remained until October, 1916, when they were raised by ½ franc a ton. An increase of 2f. 50c. per ton of 40 cubic feet in the dues for ships in ballast, took effect from 1st Jan., 1918, the effect of which was to bring the rates for laden and empty ships to the same level—8f. 50c., which as the dues are payable at the rate of 26f. 40c. to the £, is equivalent to 6s. 5d.

Improvement Schemes.—It was announced in 1914 that from and after January 1st, 1915, **the maximum draught of water** allowed to ships going through the **Suez Canal** would be increased by 1ft., making it 30ft. English.

The maximum permissible draught of ships using the Canal was 24·4 feet in 1870; in 1890 ships drawing 25·4 feet could make the passage; and during the following 24 years the increase has been at the average rate of about 1 foot every six years, thus bringing the maximum draught authorized to 29 feet.

The scheme of improvement adopted by the Company on the recommendation of the International Consultative Committee of Works, the British representatives on which are Sir William Matthews and Mr. Anthony Lister, is a comprehensive one, and the details suggest that it will meet the needs of the big ship.

A 40 feet Channel.—The declared policy of the Canal Company in regard to the deepening of the Canal is to offer a slightly greater depth of water than that available in ports east of Suez. It is claimed that, with the exception of Sydney, there is no eastern port which at low tide has a greater depth of water than that now provided in the Canal throughout the full length of nearly 105 miles. In any case the work in hand should meet the needs of any ship likely to be built for the eastern trade during the next few years.

When the Canal was opened in 1869, the width was 72 feet and the depth about 26 feet 2 inches. In June, 1913, the width at a depth of 32 feet 8 inches had been increased to a minimum of 147 feet 6 inches over a length of about 85 miles, and to a width of 328 feet over a distance of about 20 miles. The latest scheme makes provision for a depth of 40 feet throughout and for a widening up to 196 feet 8 inches in the south section, and the cutting of an appropriate number of sidings in the north and central sections, where a minimum width of 147 feet 6 inches is believed to be sufficient for the requirements of the immediate future.

The work of enlarging the capacity of the Canal presents no special difficulty on the engineering side. A good deal of sand is occasionally driven into the channel at Port Said during storms, but a remedy for this will be found in extension of the west breakwater by about 2,700 yards at a cost of over £6,000,000. The construction of this extension, which has been in hand for the past two years, is making satisfactory progress. The Suez Roads are being adequately dredged in accordance with an agreement between the Egyptian Government and the Company.

Almost up to the end of 1915 the works for extending the jetty to the west of Port Said, works of capital importance for the **protection of the entry** to the Canal, were pushed on uninterruptedly. In November, however, for want of hydraulic lime, the manufacture of artificial rocks for this jetty was interrupted. The submarine foundations in stone and rubble of the new jetty were, as a matter of fact, completed to a length of 2,500 metres; the protective blocks were laid for 1,040 metres, and cemented for over 800 metres. The protection of the Channel is thus secured, and there is no need for any apprehension as to its future.

Travel in India.

Twenty years ago, a tour in India was possible only to the wealthy, the leisured and those who had friends in the country. The cost of the journey was very high, the methods of transportation were very slow; and the facilities for travel were so indifferent that it was a bold man who consigned himself to the mercies of the country without a sheaf of letters of introduction. Now the mail which in peace time is posted in London on Friday night, reaches Bombay in thirteen and a half days, and the passenger can travel by the same route and with the same speed as the mail. A dozen lines have covered the sea route between Europe and India and Ceylon with a plexus of regular services. The Indian Railways provide facilities on the trunk lines unsurpassed by the *trains-de-luxe* of Europe, and the Indian hotel has grown into a really comfortable caravanserai.

In the touring season, which extends from November to March, there is the attraction of a perfect climate. It is never very hot; in the North indeed it is really cool, it is always fine and fresh and bracing. If there is one country in the world to which that elusive term applies, here we have at the season when the tourist arrives the real "Indian summer." Then there is its infinite variety. India is in no sense a nation and never will be. Its peoples are wide as the Poles asunder, each has its own art, its own architecture, its own customs and its own civilisation. A certain superficial resemblance runs through each; beneath lies a never-ending variety which age cannot wither nor custom stale.

The Grand Tour.—People coming to India for the first time so often ask:—"Where shall I go?" Well, wherever else the tourist may go, whatever else he should leave out, he should omit nothing on the Grand Tour. It is the foolish custom nowadays to sneer at those who follow the beaten tracks, but the visitor who shuns any part of the orthodox journey across India misses what nothing else can repay. **Bombay** is by far the most convenient point of departure, for here "the world end steamers wait," here is one of the finest cities in the British Empire, and here the traveller can best complete his outfit and arrangements. From Bombay stretch northwards the two great trunk lines of India. One, the **Bombay Baroda & Central India Railway**, leads through the pleasant garden of Gujarat to Ahmedabad, the ancient Moslem capital of the Province, containing fine examples of Mahomedans and Jain architecture; thence to Abu for the famous Jain temples of Dilwara, and on to Ajmere, Jaipur and Agra. The other by the **Great Indian Peninsula Railway** carries the tourist over the Western Ghats by a superb mountain railway to Gwalior, whose rock fortress rises like a giant battleship from the plain, and so on to Agra. Of the glories of the Taj Mahal, Agra Fort, and the deserted city of Fatehpur Sikri it were supererogatory to speak. Another easy stage leads to **Delhi** that amazing collection of cities, dominated by the little Ridge where British valour kept the mutinous hordes at bay, and finally drove them from the city by a feat of arms unsurpassed in history. Then from Delhi the East Indian line leads comfortably to Benares, Lucknow and Calcutta, with the opportunity of an excursion to Cawnpore, if the spirit moves. The great charm of the Grand Tour is that it reveals the best that India can show. This route has the additional advantage that it fits in with any digressions which the time and purse of the traveller may permit. No one who can spare the time should fail to push northwards from Delhi to Peshawar, where the flower of the army keeps watch and ward over the Khyber, and up the dread Pass to the eyrie where the fort of Ali Masjid bars the way to all invaders. **Calcutta** is the best starting point for Darjeeling, though unfortunately the magnificent mountain panorama visible from there is often obscured at this season by mists. Then from Calcutta two alternatives open. A fine service of mail steamers leads to **Burma**, and one of the unforgettable memories of the East is a voyage down the Irrawaddy from Bhamo or Mandalay to Prome. Again, either direct from Calcutta, or *via* Burma, is an easy route to **Madras** and by way of Madura and Trichinopoly, with their peerless Hindu temples, back to Bombay, or on through Tuticorin to **Colombo**. But indeed the possibilities of expanding this tour are endless. Bombay is the best centre for the rock temples of Elephanta, Kenheri, Karli, Ellora and Ajanta. Calcutta is only a short distance from Puri the one Indian temple where there is no caste, and perhaps the most remarkable Hindu temple in the country. From Calcutta also start the river steamers which thread the steamy plains of Bengal and run to the tea gardens of Assam.

SPECIMEN TOURS.

A number of specimen tours in India are given below. They are taken from one of Messrs. Thos. Cook & Son's publications, from which firm further information may be obtained. The

traveller will also find he can obtain assistance from the principal Shipping Agents and Railway Companies, or from Messrs. Cox & Co., Messrs. Grindlay & Co., and Messrs King, King & Co.

	1st Class.	2nd Class Rail, 1st Class Steamer.
	Rs. a.	Rs. a.
FROM BOMBAY TO CALCUTTA.		
Via the North-West Provinces to Calcutta (including side trip from Calcutta to Darjeeling).		
TOUR I.—From Bombay per B. B. & C. I. Railway *via* Ahmedabad, Abu Road (for Mount Abu), Ajmer, Jaipur, Delhi, Agra, Cawnpore, Lucknow and Benares to Calcutta, thence to Darjeeling, and back to Calcutta	266 4	133 3
TOUR II.—From Bombay per G. I. P. Railway *via* Itarsi, Gwalior, Agra, Delhi, Tundla Junction, Cawnpore, Lucknow and Benares to Calcutta, thence to Darjeeling, and back to Calcutta	266 13	133 7
FROM BOMBAY TO COLOMBO.		
Via the North-West Provinces, Calcutta and Southern India to Colombo (including side trip from Calcutta to Darjeeling).		
TOUR III.—From Bombay as in Tour No. I (*via* B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta side trip to Darjeeling and back to Calcutta, thence *via* Khurda Road, for Puri (Jugganath), Madras, Tanjore, Trichinopoly, Madura, Danushkodi and Talaimannar to Colombo	423 8	212 13
TOUR IV.—From Bombay as in Tour No. II (*via* G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence as in Tour No. III to Colombo (*via* Southern India)	424 1	212 1
Via the North-West Provinces, Calcutta (including Darjeeling), Burma and Southern India.		
TOUR V.—From Bombay as in Tour No. I (*via* B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon, Rail to Mandalay. Irrawaddy Steamer to Prome, Rail to Rangoon; British India Steamer to Madras, Rail *via* Tanjore, Trichinopoly, Madura to Danushkodi; Steamer to Talaimannar and Rail to Colombo ..	585 13	399 12
TOUR VI.—From Bombay as in Tour No. II (*via* G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, thence as in Tour No. V to Colombo	587 6	400 0
FROM BOMBAY TO RANGOON.		
Via the North-West Provinces and Calcutta to Rangoon (including a tour in Burma, also including a side trip from Calcutta to Darjeeling).		
TOUR VII.—From Bombay as in Tour No. I (*via* B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon, Rail to Mandalay, Irrawaddy Steamer to Prome, Rail to Rangoon	447 9	288 14
TOUR VIII.—From Bombay as in Tour II (*via* G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon. Rail to Mandalay, Irrawaddy, Steamer to Prome, Rail to Rangoon	448 2	289 2

	1st Class.	2nd Class Rail, 1st Class Steamer.
FROM CALCUTTA TO BOMBAY. *Via the North-West Provinces.*	Rs. a.	Rs. a.
TOUR IX.—From Calcutta *via* Benares, Lucknow, Cawnpore, Tundla, Agra, Delhi, Rewari, Jaipur, Ajmer (for Udaipur), Abu Road (for Mt. Abu), Ahmedabad and Baroda to Bombay	165 5	82 11
TOUR X.—From Calcutta *via* Benares, Moghal Serai, Cawnpore, Tundla, Agra, Delhi, Rewari, Jaipur Ajmer (for Udaipur), Abu Road (for Mt. Abu) Ahmedabad and Baroda to Bombay	167 7	83 13
TOUR XI.—From Calcutta *via* Benares, Moghal Serai, Cawnpore, Tundla, Agra, Gwalior and Itarsi to Bombay..	119 1	74 9
TOUR XII.—From Calcutta *via* Benares, Moghal Serai, Cawnpore, Delhi, Muttra, Agra, Gwalior and Itarsi to Bombay	167 14	83 15
CIRCULAR TOUR FROM CALCUTTA.		
TOUR XIII.—From Calcutta *via* Benares, Lucknow, Cawnpore, Tundla, Agra, Bandikui, Jaipur, Delhi, and Allahabad to Calcutta	191 1	95 9
Extensions, Via Southern India to Colombo.		
TOUR XIV.—From Bombay *via* Poona, Hyderabad, Wadi, Raichur, Madras, Tanjore, Trichinopoly, Madura, Danushkodi, and Talaimannar to Colombo	154 6	77 13
TOUR XV.—From Bombay *via* Poona, Hyderabad, Wadi, Guntakal, Bangalore, Erode, Trichinopoly, Madura, Danushkodi, and Talaimannar to Colombo	148 5	74 12
Extensions to above Tours.		
From Ajmer to Udaipur and return	34 12	17 6
From Abu Road to Mount Abu and return, one seat in Tonga (This excursion is strongly recommended, the scenery being very beautiful) ..	7 0	....
From Delhi to Lahore and return *via* Umballa and Amritsar	58 2	29 2
From Delhi *via* Bhatinda, Ferozepore to Lahore, returning *via* Amritsar Umballa to Delhi	56 15	28 8
From Calcutta to Darjeeling and return	101 0	50 8
From Colombo to Kandy and return	9 0	6 0
From Kurda Road to Puri (Jagganath and return)	5 4	2 10

(*All fares subject to change without previous notice.*)

LIST OF HOTELS IN INDIA.

The following list of hotels is largely based on information kindly supplied by Messrs. Thos. Cook & Son, Bombay :—

AGRA.—Cecil, Laurie's Great Northern, Metropole, Carlton.
AHMEDABAD.—Grand, Empire.
ALLAHABAD.—Central, Grand.

BANGALORE.—West End, Cubbon.
BENARES.—Clark's, Hotel de Paris.
BOMBAY.—Taj Mahal, Majestic, Great Western, Apollo, Watson's.
CALCUTTA.—Great Eastern, Grand, Spence's, Continental.
CAWNPORE.—Civil and Military.

DELHI.—Cecil, Maiden's, Civil and Military.
GOA.—Crescent.
GULMARG.—Nedou's.

GWALIOR.—Gwalior Hotel.
HYDERABAD (Deccan).—Montgomery's.

JEYPORE.—Jeypore, Kaisar-i-Hind, The New Hotel.
JUBBULPORE.—Jackson's.

KARACHI.—North-Western, Killarney
LAHORE.—Nedou's, Cecil.

LUCKNOW.—Royal, Carlton, Imperial, Civil and Military.

MADRAS.—Hotel D'Angelis, Connemara, Brind's
MANDALAY.—Salween House.
MEERUT.—Empress.

PESHAWAR.—Flashmans.
POONA.—Napier, Poona, Connaught.

RANGOON.—Strand, Royal, Minto Mansions
RAWAL PINDI—Flashmans, Imperial.

SECUNDERABAD—Montgomery's.

HOTELS IN PRINCIPAL HILL STATIONS :—

COONOOR.—Glenview.
DARJEELING.—Woodland's, Mount Everest, Grand (Rockville), Drum Druid.

MAHABLESHWAR.—Race View.
MATHERAN.—Rugby.
MOUNT ABU.—Rajputana.

MURREE.—Powell's, Rowbury's, Viewforth
MUSSOORIE.—Charleville, Savoy.
NAINI TAL.—Metropole, Grand.

OOTACAMUND.—Sylk's, Centre, Firgrove.

PACHMARHI.—Hill.

SIMLA.—Corstorphon's, Grand, Lauries, Longwood, Faletti's Royal.

An Indian Glossary.

ABKARI.—Excise of liquors and drugs.

AIN.—A timber tree, TERMINALIA TOMENTOSA.

AMIL.—A subordinate executive official under native rule; in Sind the name is still applied to Hindus of the clerical class.

ANICUT.—A dam or weir across a river for irrigation purposes, Southern India.

ANJUMAN.—A communal gathering of Mahomedans.

APHUS.—Believed to be a corruption of ALPHONSE, the name of the best variety of Bombay mango.

AUS.—The early rice crop, Bengal; syn. Ahu, Assam.

AVATAR.—An incarnation of Vishnu.

BABU.—(1) A gentleman in Bengal, corresponding to Pant in the Deccan and Konkan. (2) Thence used by Anglo-Indians of a clerk or accountant.

BABUL.—A common thorny tree, the bark of which is used for tanning, ACACIA ARABICA.

BAGHLA.—(1) A native boat (Buggalow). (2) The common pond heron or paddybird.

BAIRAGI.—A Hindu religious mendicant.

BAJRA or BAJRI.—The bulrush millet, a common food-grain, PENNISETUM TYPHOIDEUM; syn. cambu, Madras.

BAND.—A dam or embankment (Bund).

BANYAN.—A species of fig-tree, FICUS BENGALENSIS.

BARSAT.—(1) A fall of rain, (2) the rainy season.

BASTI.—(1) A village, or collection of huts, (2) A Jain temple, Kanara.

BATTA.—Lit. 'discount,' and hence allowances by way of compensation.

BAZAR.—(1) A street lined with shops, India proper; (2) a covered market, Burma.

BER.—A thorny shrub bearing a fruit like a small plum, ZIZYPHUS JUJUBA.

BEWAR.—Name in Central Provinces for shifting cultivation in jungles and hill-sides; syn. taungya, Burma; jhum, North-Eastern India.

BHADOI.—Early autumn crop, Northern India, reaped in the month Bhadon.

BHANG.—The dried leaves of the hemp plant, CANNABIS SATIVA, a narcotic.

BHANWAR.—Light sandy soil; syn. bhur.

BHARAL.—A Himalayan wild sheep, OVIS NAHURA.

BHENDI.—A succulent vegetable (HIBISCUS ESCULENTUS).

BHUSA.—Chaff, for fodder.

BHUT.—The spirit of departed persons.

BIDRI.—A class of ornamental metalwork, in which blackened pewter is inlaid with silver, named from the town of Bidar, Hyderabad.

BIGHA.—A measure of land, varying widely; the standard bigha is generally five-eighths of an acre.

BIR (BID).—A grassland—North India.

BLACK COTTON SOIL.—A dark-coloured soil, very retentive of moisture, found in Central and Southern India.

BOARD OF REVENUE.—The chief controlling revenue authority in Bengal, the United Provinces and Madras.

BOR.—See BER.

BRINJAL.—A vegetable, SOLANUM MELONGENA; syn. egg-plant.

BUNDER, or bandar.—A harbour or port.

BURUJ.—A bastion in a line of battlements.

CADJAN.—Palm leaves, used for thatch.

CHABUTRA.—A platform of mud or plastered brick, used for social gatherings, Northern India.

CHADAR.—A sheet worn as a shawl by men and sometimes by women. (Chudder.)

CHAITYA.—An ancient Buddhist chapel.

CHAMBAR (CHAMAR).—A caste whose trade is to tan leather.

CHAMPAK.—A tree with fragrant blossoms, MICHELIA CHAMPACA.

CHAPATI.—A cake of unleavened bread. (Chaupatti.)

CHAPRASI.—An orderly or messenger, Northern India; syn. pattawala, Bombay; peon, Madras.

CHARAS.—The resin of the hemp plant, CANNABIS SATIVA, used for smoking.

CHARPAI (charpoy)—A bedstead with four legs, and tape stretched across the frame for a mattress.

CHAUDHRI.—Under native rule, a subordinate revenue official; at present the term is applied to the headman or representative of a trade guild.

CHAUKIDAR.—The village watchman and rural policeman.

CHAUTH.—The fourth part of the land revenue, exacted by the Marathas in subject territories.

CHELA.—A pupil, usually in connexion with religious teaching.

CHHAONI.—A collection of thatched huts or barracks; hence a cantonment.

CHHATRI.—(1) An umbrella, (2) domed building such as a cenotaph.

Note.—According to the Hunterian system of transliteration here adopted the vowels have the following values:—a either long as the a in 'father,' or short as the u in 'cut,' e as the ai in 'gain,' i either short as the i in 'bib,' or long as the ee in 'feel,' o as the o in 'bone,' u either short as the oo in 'good,' or long as the oo in 'boot,' ai as the i in 'mile,' au as the ou in 'grouse.' This is only a rough guide. The vowel values vary in different parts of India in a marked degree. The consonantal values are too intricate for discussion here.

CHIEF COMMISSIONER.—The administrative head of one of the lesser Provinces in British India.

CHIKOR.—A kind of partridge, CACCABIS CHUCAR.

CHIKU.—The Bombay name for the fruit of ACHRAS SAPOTA, the Sapodilla plum of the West Indics.

CHINAR.—A plane tree, PLATANUS ORIENTALIS.

CHINKARA.—The Indian gazelle, GAZELLA BENNETTI, often called 'ravine deer.'

CHITAL.—The spotted deer, CERVUS AXIS.

CHOLAM.—Name in Southern India for the large millet, ANDROPOGON SORGHUM; syn. jowar.

CHOLI.—A kind of short bodice worn by women.

CHUNAM, chuna.—Lime plaster.

CIRCLE.—The area in charge of—(1) A Conservator of forests; (2) A Postmaster or Deputy Postmaster-General; (3) A Superintending Engineer of the Public Works Department.

CIVIL SURGEON.—The officer in medical charge of a District.

COGNIZABLE.—An offence for which the culprit can be arrested by the police without a warrant.

COLLECTOR.—The administrative head of a District in Regulation Provinces corresponding to the Deputy Commissioner in non-regulation areas.

COMMISSIONER.—(1) The officer in charge of a Division or group of Districts; (2) the head of various departments, such as Stamps, Excise, etc.

COMPOUND.—The garden and open land attached to a house. An Anglo-Indian word perhaps derived from 'kumpan', a hedge.

CONSERVATOR.—The Supervising Officer in charge of a Circle in the Forest Department.

COUNCIL BILLS.—Bills or telegraphic transfers drawn on the Indian Government by the Secretary of State in Council.

COUNT.—Cotton yarns are described as 20's, 30's, etc., counts when not more than a like number of hanks of 840 yards go to the pound avoirdupois.

COURT OF WARDS.—An establishment for managing estates of minors and other disqualified persons.

CRORE, karor.—Ten millions.

DAFFADAR.—A non-commissioned native officer in the army or police.

DAH OR DAO.—A cutting instrument with no point, used as a sword, and also as an axe, Assam and Burma.

DAK (dawk).—A stage on a stage coach route. Dawk bungalow is the travellers' bungalow maintained at such stages in days before railways came.

DAKAITI, DACOITY.—Robbery by five or more persons.

DAL.—A generic term applied to various pulses.

DAM.—An old copper coin, one-fortieth of a rupee,

DARBAR.—(1) A ceremonial assembly, especially one presided over by the Ruler of a State, hence (2) the Government of a Native State.

DARGAH.—A Mahomedan shrine or tomb of a saint.

DARI., Dhurrie—A rug or carpet, usually of cotton, but sometimes of wool.

DAROGHA.—The title of officials in various departments; now especially applied to subordinate controlling Officers in the Police and Jail Departments.

DARWAN.—A door-keeper.

DARWAZA.—A gateway.

DEBOTTAR.—Land assigned for the upkeep of temples or maintenance of Hindu worship.

DEODAR.—A cedar, CEDRUS LIBANI or C. DEODARA.

DEPUTY COMMISSIONER.—The Administrative head of a District in non-regulation areas corresponding to the Collector in Regulation Provinces.

DEPUTY MAGISTRATE AND COLLECTOR.—A subordinate of the Collector, having executive and judicial (revenue and criminal) powers; equivalent to Extra Assistant Commissioner in non-regulation areas.

DESAI.—A revenue official under native (Maratha) rule.

DESH.—(1) Native country: (2) the plains as opposed to the hills, Northern India; (3) the plateau of the Deccan above the Ghats.

DESHMUH.—A petty official under native (Maratha) rule.

DEVA.—A deity.

DEVASTHAN.—Land assigned for the upkeep of a temple or other religious foundation.

DHAK.—A tree, BUTEA FRONDOSA, with brilliant orange-scarlet flowers used for dyeing, and also producing a gum; syn. palas, Bengal and Bombay; Chhiul, Central India.

DHAMANI.—A heavy shighram or tonga drawn by bullocks.

DHARMSALA.—A charitable institution provided as a resting-place for pilgrims or travellers, Northern India.

DHATURA.—A stupefying drug, DATURA FASTUOSA.

DHENKLI.—Name in Northern India for the lever used in raising water; syn. picottah.

DHOBI.—A washerman.

DHOTI.—The loincloth worn by men.

DISTRICT.—The most important administrative unit of area.

DIVISION.—(1) A group of districts for administrative and revenue purposes, under a Commissioner; (2) the area in charge of a Deputy Conservator of Forests, usually corresponding with a (revenue) District; (3) the area under a Superintendent of Post Offices; (4) a group of (revenue) districts under an Executive Engineer of the Public Works Department.

DIWAN.—The chief minister in a Native State.

DIWANI.—Civil, especially revenue, administration; now used generally in Northern India of civil justice and Courts.

DOAB.—The tract between two rivers, especially that between the Ganges and Jumna.

DRY CROP.—A crop grown without artificial irrigation.

DRY RATE.—The rate of revenue for unirrigated land.

DUN.—A valley, Northern India.

EKKA.—A small two-wheeled conveyance drawn by a pony, Northern India.

EXTRA ASSIST ANT COMMISSIONER.—See Deputy Magistrate and Collector.

FAKIR.—Properly an Islamic mendicant or a mendicant who has no creed, but often loosely used of Hindu mendicants also.

FAMINE INSURANCE GRANT.—An annual provision from revenue to meet direct famine expenditure, or the cost of certain classes of public works, or to avoid debt.

FARMAN.—An imperial (Mughal) order or grant.

FAUJDARI.—Under native rule, the area under a Faujdar or subordinate governor; now used generally of Magistrates' Criminal Courts.

FINANCIAL COMMISSIONER.—The chief controlling revenue authority in the Punjab, Burma and the Central Provinces.

GADDI, Gadi.—The cushion or throne of (Hindu) royalty.

GANJA.—The unfertilised flowers of the cultivated female hemp plant, CANNABIS SATIVA, used for smoking.

GAUR.—Wild cattle, commonly called 'bison', BOS GAURUS.

GAYAL.—A species of wild cattle, BOS FRONTALIS, domesticated on the North-East Frontier; syn. mithan.

GHAT, Ghaut.—(1) A landing-place on a river; (2) the bathing steps on the bank of a tank; (3) a pass up a mountain; (4) in European usage, a mountain range. In the last sense especially applied to the Eastern and Western Ghats.

GHATWAL.—A tenure-holder who originally held his land on the condition of guarding the neighbouring hill passes (ghats), Bengal.

GHI, Ghee,—Clarified butter.

GINGELLY.—See TIL.

GODOWN.—A store room or warehouse. An Anglo-Indian word derived from the Malay 'gadang.'

GOPURAM.—A gateway, especially applied to the great temple gateways in Southern India.

GOSAIN, Goswami.—A (Hindu) devotee; lit. one who restrains his passions.

GOSHA.—Name in Southern India for 'caste' women; lit. 'one who sits in a corner'; syn. parda.

GRAM.—A kind of pea, CICER ARIETINUM. In Southern India the pulse DOLICHOS BIFLORUS is known as horse gram.

GUARANTEED.—(1) A class of Native States in Central India; (2) A class of railways.

GUNJ.—The red seed with a black 'eye' of ABRUS PRECATORIUS, a common wild creeper, used as the official weight for minute quantities of opium 12th TOLA.

GUR, Goor.—Crude sugar; syn. jaggery, southern India; tanyet, Burma.

GURAL.—A Himalayan goat antelope, CEMAS GORAL.

GURU.—(1) A Hindu religious preceptor; (2) a schoolmaster, Bengal.

HAJ.—Pilgrimage to Mecca.

HAJJI.—A mahomedan who has performed the haj. He is entitled to dye his beard red.

HAKIM.—A native doctor practising the Mahomedan system of medicine.

HALALKHOR.—A sweeper or scavenger; lit. one to whom everything is lawful food.'

HALI.—Current. Applied to coin of Native States, especially Hyderabad.

HAMAL.—(1) A porter or cooly, (2) a house servant.

HEJIRA. (HIJRAH)—The era dating from the flight of Mahomed to Mecca, June 20th, 622 A.D.

HILSA.—A kind of fish, CLUPEA ILISHA.

HTI.—An iron pinnacle placed on a pagoda in Burma.

HUKKA, HOOKAH.—The Indian tobacco pipe.

IDGAH.—An enclosed place outside a town where Mahomedan services are held on festivals known as the Id., etc.

INAM.—Lit. 'reward'. Hence land held revenue free or at a reduced rate, often subject to service. See DEVASTHAU, SARAMJAM, WATAN.

INUNDATION CANAL.—A channel taken off from a river at a comparatively high level, which conveys water only when the river is in flood.

JACK FRUIT.—Fruit of ARTOCARPUS INTEGRIFOLIA, ver. PHANAS.

JAGGERY, jagri.—Name in Southern India for crude sugar; syn. gur.

JAGIR.—An assignment of land, or of the revenue of land held by a Jagirdar.

JEMADAR.—A native officer in the army or police.

JHIL.—A natural lake or swamp, Northern India; syn. bil, Eastern Bengal and Assam.

JIHAD.—A religious war undertaken by Musalmans.

JIRGA.—A council of tribal elders, North-West frontier.

JOWAR.—The large millet, a very common food-grain, ANDROPOGON SORGHUM, or SORGHUM VULGARE; syn. cholam and jola, in Southern India.

JUDICIAL COMMISSIONER.—An officer exercising the functions of a High Court in the Central Provinces, Oudh, and Sind.

KACHERI, kachahri.—An office or office building, especially that of a Government official.

KADAR, karbi.—The straw of jowari (*q. v.*)—a valuable fodder.

KAJU, kashew.—The nut of ANACARDIUM OCCIDENTALE largely grown in the Konkan

KAKAR.—The barking deer, CERVULUS MUNTJAC.

KALAR, kallar.—Barren land covered with salt or alkaline efflorescences, Northern India.

KAMARBAND, Cummerbund.—A waistcloth, or belt.

KANAT.—The wall of a large tent.

KANGAR.—A kind of portable warming-pan, carried by persons in Kashmir to keep themselves warm.

KANKAR.—Nodular limestone, used for metalling roads, as building stones or for preparation of lime.

KANS.—A coarse glass which spreads and prevents cultivation especially in Bundelkhand, SACCHARUM SPONTANEUM.

KANUNGO.—A revenue Inspector.

KARAIT.—A very venomous snake, BUNGARUS CANDIDUS or CAERULEUS.

KARBHARI.—A manager.

KAREZ.—Underground tunnels near the skirts of hills, by which water is gradually led to the surface for irrigation, especially in Baluchistan.

KARKUN.—A clerk or writer, Bombay.

KARMA.—The doctrine that existence is conditioned by the sum of the good and evil actions in past existences.

KARNAM.—See PATWARI.

KAZI.—Under native rule, a judge administering Mahomedan law. Under British rule, the kazi registers marriages between Mahomedans and performs other functions, but has no powers conferred by law.

KHALASI.—A native fireman, sailor, artilleryman, or tent-pitcher.

KHALSA.—Lit. 'pure.' (1) Applied especially to themselves by the Sikhs, the word Khalsa being equivalent to the Sikh community; (2) land directly under Government as opposed to land alienated to grantees, etc., Northern India.

KHANDI, candy.—A weight especially used for cotton bales in Bombay-equivalent to 20 mds.

KHARAB.—In Bombay of any portion ran assessed survey No. which being uncultivable is left unassessed.

KHARIF.—Any crops sown just before or during the main S. W. monsoon.

KHAS.—Special, in Government hands. Khas tahasildar, the manager of a Government estate.

KHASADAR.—Local levies of foot soldiers, Afghanistan.

KHAS-KHAS, Kus-Kus.—A grass with scented roots, used for making screens which are placed in doorways and kept wet to cool a house by evaporation, ANDROPOGON SQUARROSUS.

KHEDDA, kheda.—A stockade into which wild elephants are driven; also applied to the operations for catching.

KHICHADI, kejjeree.—A dish of cooked rice and other ingredients, and by Anglo-Indians specially used of rice with fish.

KHILAT.—A robe of honour.

KHUTBA.—The weekly prayer for Mahomedans in general and for the reigning sovereign in particular.

KILLA.—A fort.

KINCOB, kamkhwab.—Silk textiles brocaded with gold or silver.

KODALI.—The implement like a hoe or mattock in common use for digging; syn. mamuti, Southern India.

KONKAN.—The narrow strip of low land between the Western ghats and the sea.

KOS.—A variable measure of distance, usually estimated at about two miles The distance between the kos-minars or milestones on the Mughal Imperial roads averages a little over 2 miles, 4 furlongs, 150 yards.

KOT.—Battlements.

KOTHI.—A large house.

KOTWAL.—The head of the police in a town, under native rule. The term is still used in Hyderabad and other parts of India.

KOTWALI.—The chief police station in a head-quarters town.

KULKARNI.—See PATWARI.

KUMBHAR.—A potter.

KURAN.—A big grass land growing grass fit for cutting.

KYARI.—Land embanked to hold water for rice cultivation.

KYAUNG.—A Buddhist monastery, which always contains a school, Burma.

LAKH, lac.—A hundred thousand.

LAMBARDAR.—The representative of the cosharers in a zamindari village, Northern India.

LANGUR.—A large monkey, SEMNOPITHECUS ENTELLUS.

LASCAR, correct lashkar.—(1) an army, (2) in English usage a native Sailor.

LAT.—A monumental pillar.

LATERITE.—A vesicular material formed of disintegrated rock, used for buildings and making roads; also probably valuable for the production of aluminium. Laterite produces a deep brichord soil.

LINGAM.—The phallic emblem, worshipped as the representative of Shiva.

LITCHI.—A fruit tree grown in North India (LITCHI CHINENSIS).

LONGYI.—A waistcloth, Burma.

LOTA.—A small brass water-pot.

LUNGI, loongi—(1) A turban; (2) a cloth worn by women.

MADRASA.—A school especially one for the higher instruction of Mahomedans.

MAHAJAN.—The guild by Hindu or Jain merchants in a city. The head of the Mahaj anssi, the Nagarsheth (*q. v.*).

MAHAL.—(1) Formerly a considerable tract of country; (2) now a village or part of a village for which a separate agreement is taken for the payment of land revenue; (3) a department of revenue, *e.g.*, right to catch elephants, or to take stone; (4) in Bombay a small Taluka under a MAHALKARI.

MAHANT.—The head of a Hindu conventual establishment.

MAHARAJA.—A title borne by Hindus, ranking above Raja.

MAHSEER, mahasir.—A large carp, BARBUS FOR (lit. 'the big-headed').

MAHUA.—A tree, BASSIA LATIFOLIA, producing flowers used (when dried) as food or for distilling liquor, and seeds which furnish oil.

MAIDAN.—An open space of level ground; the park at Calcutta.

MAJOR WORKS.—Irrigation works for which separate accounts are kept of capital, revenue, and interest.

MAKTAB.—An elementary Mahomedan school.

MALGUZAR (revenue payer).—(1) The term applied in the Central Provinces to a co-sharer in a village held in ordinary proprietary tenure; (2) a cultivator in the Chamba State.

MALI.—A gardener.

MAMLATDAR.—The officer in charge of a taluka, Bombay, whose duties are both executive and magisterial; syn. tahasildar.

MANDAP, or mandapam.—A porch or pillared hall, especially of a temple.

MANGOSTEEN.—The fruit of GARCINIA MANGOSTANA.

MARKHOR.—A wild goat in North Western India, CAPRA FALCONERI.

MASJID.—A mosque. Jama Masjid, the principal mosque in a town, where worshippers collect on Fridays.

MASNAD.—Seat of state or throne, Mahomedan; syn. gaddi.

MATH.—A Hindu conventual establishment.

MAULVI.—A person learned in Muhammadan law.

MAUND, ver. Man.—A weight varying in different localities. The Ry. maund is 80 lbs.

MAYA.—Sanskrit term for delusion.

MEHEL or MAHAL.—A palace.

MELA.—A religious festival or fair.

MIHRAB.—The niche in the centre of the western wall of a mosque.

MIMBAR.—Steps in a mosque, used as a pulpit.

MINAR.—A pillar or tower.

MINOR WORKS.—Irrigation works for which regular accounts are not kept, except, in some cases, of capital.

MISTRI.—(1) a foreman, (2) a cook.

MONSOON.—Lit. 'season,' and specifically 1) The S. W. Monsoon, which is a Northward extension of the S. E. trades, which in the Northern Summer cross the equator and circulate into and around the low pressure area over North India, caused by the excessive heating of the land area, and (2) The N. E. monsoon, which is the current of cold winds blowing down during the Northern winter from the cold land areas of Central Asia, giving rain in India only in S. E. Madras and Ceylon through moisture acquired in crossing the Bay of Bengal, and passing across the equator into the low pressure areas of the Australasian Southern summit.

MUFASSAL, mofussil.—The outlying parts of a District, Province or Presidency, as distinguished from the head-quarters (Sadr).

MUKADDAM, muccadum.—A representative or headman.

MUKHTAR (corruptly mukhtiar).—(1) A legal practitioner who has not got a sanad, and therefore cannot appear in court as of right; (2) any person holding a power of attorney on behalf of another person.

MUKHTIARKAR.—The officer in charge of a taluka, Sind, whose duties are both executive and magisterial; syn. tahasildar.

MUKTI, 'release.'—The perfect rest attained by the last death and the final reabsorption of the individual soul into the world—soul, syn. NIRVANA, MOKSHA.

MUNG, mug.—A pulse, PHASEOLUS RADIATUS: syn. mag, Gujarat.

MUNJ.—(1) A tall grass (SACCHARUM MUNJA in North India, from which mats are woven, and the Brahman sacred thread worn; (2) the said thread.

MUNSHI.—A teacher of Hindustan or any Perso-Arabian language.

MUNSIF.—Judge of the lowest Court with civil jurisdiction.

MURUM, moorum.—Gravel, used for metalling roads.

NACHANI-NAGLI—See RAGI.

NAGARKHANA, Nakkarkhana.—A place where drums are beaten.

NAGARSHETH.—The head of the trading guild of Hindu and Jain Merchants in a city.

NAIB.—Assistant or Deputy.

NAIK.—A leader, hence (1) a local chieftain, in Southern India; (2) a native officer of the lowest rank (corporal) in the Indian army.

NAT.—A demon or spirit, Burma.

NAWAB.—A title borne by Musalmans, corresponding roughly to that of Raja among Hindus.

NAZAR, nazarana.—A due paid on succession or on certain ceremonial occasions.

NET ASSETS.—(1) In Northern India, the rent or share of the gross produce of land taken by the landlord; (2) in Madras and Lower Burma, the difference between the assumed value of the crop and the estimate of its cost of production.

NEWAR.—Broad cockney woven across bed steads instead of iron slats.

NGAPI.—Pressed fish or salted fish paste largely made and consumed in Burma.

NILGAI.—An antelope, BOSELAPHUS TRAGOCAMELUS.

NIM, neem.—A tree, MELIA AZADIRACHTA, the berries of which are used in dyeing.

NIRVANA.—See MUKTI.

NIZAM.—A title borne by the ruler of Hyderabad State.

NIZAMAT.—A sub division of a Native State, corresponding to a British District, chiefly in the Punjab and Bhopal.

NON-AGRICULTURAL ASSESSMENT.—Enhanced assessment imposed when land already assessed as agricultural is diverted to use as a building site or for industrial concerns.

NON-COGNISABLE.—An offence for which the culprit cannot be arrested by the police without a warrant.

NON-OCCUPANCY TENANTS.—A class of tenants with few statutory rights, except in Oudh, beyond the terms in their leases or agreements.

NON-REGULATION.—A term formerly applied to certain Provinces to show that the regulations of full code of legislation was not in force in them.

NULLAH, NALA.—A ravine, watercourse, or drain.

OCCUPANCY TENANTS.—A class of tenants with special rights in Central Provinces, in United Provinces.

PADAUK.—A well known Burmese tree (PTEROCARPUS sp.) from the behaviour of which the arrival of the monsoon is prognosticated.

PADDY.—Unhusked rice.

PAGA.—A troop of horses among the Marathas.

PAGI.—A tracker thieves of strayed or stolen animals.

PAIGAH.—A tenure in Hyderabad State.

PAIK.—(1) A foot soldier; (2) in Assam formerly applied to every free male above sixteen years.

PAIREE.—The name of the second best variety of Bombay mango, distinguishable from the APHUS (*q. v.*) by its pointed tip, and by the colour being less yellow and more green and red.

PALAS.—See DHAK.

PALKI.—A palanquin or litter.

PAN.—The betel vine, PIPE BETLE.

PARAB.—A public place for the distribution of water, maintained by charity.

PARABADI.—A platform with a smaller platform like a dovecot on a centre pole or pillar built and endowed or maintained by charity, where grain is put every day for animals and birds.

PANCHAMA.—Low caste, Southern India.

PANCHAYAT.—(1) A committee for management of the affairs of a caste, village, or town; (2) arbitrators. Theoretically the panchayat has five (panch) members.

PANDIT.—A Hindu title, strictly speaking applied to a person versed in the Hindu scriptures, but commonly used by Brahmans. In Assam applied to a grade of Inspectors of primary schools.

PANSUPARI.—Distribution of PAN and SUPARI (*q. v.*) as a form of ceremonial hospitality.

PARDA, purdah.—(1) A veil or curtain; (2) the practice of keeping women secluded; syn. gosha.

PARDESI.—Foreign. Used in Bombay especially of Hindu servants, syces, &c., from North India.

PARGANA.—Fiscal area or petty sub-division of a tahsil, Northern India.

PASHM.—The fine wool of the Tibetan goat.

PASO.—A waistcloth.

PAT, put.—A stretch of firm, hard clay.

PATEL.—A village headman, Central and Western India; syn. reddi, Southern India, gaonbura, Assam; padhan, Northern and Eastern India: Mukhi, Guzarat

PATIDAR.—A co-sharer in a village, Gujarat.

PATTAWALLA.—See CHAPRASI.

PATWARI.—A village accountant; syn. karnam, Madras; kulkarni, Bombay Deccan; talati, Gujarat; shanbhog, Mysore, Kanara and Coorg; Mandal, Assam; Tapedar, Sind.

PEON.—See CHAPRASI.

PESHKASH.—A tribute or offering to a superior.

PHULAV, (Pilow).—A dish of rice and other ingredients, and by Anglo-Indians specifically used of chicken with rice and spices.

PHULKARI.—An embroidered sheet; lit. flower-work.

PICE, paisa.—A copper or bronze coin worth one farthing; also used as a generic term for money.

PICOTTAH.—A lever for raising water in a bucket for irrigation, Southern India; syn. dhenkul or dhenkuli, or dhikli, Northern India.

PIPAL.—A sacred tree, FICUS RELIGIOSA.

PIR.—A Mahomedan religious teacher or saint.

PLEADER.—A class of legal practitioner.

PONGYI.—A Buddhist monk or priest, Burma.

POSTIN, poshteen.—A coat or rug of sheepskin tanned with the wool on, Afghanistan.

PRANT.—An administrative sub-division in Maratha States, corresponding to a British District (Baroda) or Division (Gwalior); also in Kathiawar.

PRESIDENCY.—A former Division of British India.

PROTECTED.—Forests over which a considerable degree of supervision is exercised, but less than in the case of 'reserved' forests.

PROVINCE.—One of the large Divisions of British India.

PUJA.—Worship, Hindu.

PUJARI.—The priest attached to a temple.

PUNDIT.—See Pandit.

PURANA.—Lit. 'old' Sanskrit (1) applied to certain Hindu religious books, (2) to a geological 'group'; (3) also to 'punch-marked' coins.

PUROHIT—A domestic chaplain or spiritual guide, Hindu.

PWE.—An entertainment, Burma.

RABI.—Any crop sown after the main South-West monsoon.

RAGI (ELEUSINE COROCANA).—A small millet used as a food-grain in Western and Southern India; syn. marua, Nagli Nachni.

RAJA.—A title borne by Hindus and occasionally by Musalmans, corresponding roughly to that of Nawab which is peculiar to Musalmans.

RAMOSHI.—A caste whose work is watch and ward in the village lands and hence used of any chaukidar (*q. v.*).

RANA.—A title borne by some Rajput chiefs, equivalent to that of Raja.

RANI.—The wife or widow of a Raja.

RAO.—A title borne by Hindus, either equivalent to, or ranking below, that of Raja.

REGAR.—Name for a black soil in Central and Southern India, which is very retentive of moisture, and suitable for growing cotton.

REGULATION.—A term formerly applied to certain provinces to show that the Regulations or full code of legislation applied to them.

REH.—Saline or alkaline efflorescences on the surface of the soil, Northern India.

RESERVED.—Forests intended to be maintained permanently.

RICKSHAW.—A one or two seat vehicle on two wheels drawn by coolies, used in the hills.

ROHU.—A kind of fish, LABEO ROHITA.

RYOTWARI.—The system of tenure in which land revenue is imposed on the actual occupants of holdings.

SADR, sudder.—Chief (adjective). Hence the headquarters of a District; formerly applied to the Appellate Courts.

SAFFLOWER.—A thistle which yields a yellow dye from its petals and oil from its seeds (CARTHAMUS TINCTORIUS), ver. Kardai, Kushanti.

SAL.—A useful timber tree in Northern India, SHOREA ROBUSTA.

SAMBAR.—A deer, CERVUS UNICOLOR; syn. jarau.

SAN.—Bombay hemp, CROTALARIA JUNCEA.

SANAD.—(1), A charter or grant, giving its name to a class of States in Central India held under a sanad, (2) any kind of deed of grants.

SANNYASI.—A Hindu mendicant.

SARI.—A long piece of cloth worn by women as a shawl.

SARANJAM.—Land held revenue free or on a reduced quit-rent in consideration of political services rendered by the holder's ancestors.

SARKAR.—(1) The Government; (2) a tract of territory under Muhammadan rule, corresponding roughly to a Division under British administration.

SARSUBAH.—An officer in charge of a Division in the Baroda State corresponding to Commissioner of British territories.

SATI.—Suicide by a widow, especially on the funeral pyre of her husband.

SAWBWA.—A title borne by chiefs in the Shan States, Burma.

SEMAL or cotton tree.—A large forest tree with crimson flowers and pods containing a quantity of floss, BOMBAY MALABARICUM.

SEROW, sarau.—A goat antelope, NEMORHAEDUS BUBALINUS.

SETTLEMENT.—(1) The preparation of a cadastral record and the fixing of the Government revenue from land; (2) the local inquiry made before Forest Reserves are created; (3) the financial arrangement between the Government of India and Local Governments.

SHANBHOG.—See PATWARI.

SHASTRAS.—The religious law-books of the Hindus.

SHEGADI, seggaree.—A pan on 3 feet with live charcoal in it.

SHER, ser, seer.—A weight, or measure varying much in size in different parts of the country. The Railway ser is about 2 lbs.

SHETH, shethia.—A Hindu or Jain merchant.

SHIGURAM.—See TONGA.

SHISHAM or sissu.—A valuable timber tree, DALBERGIA SISSOO.

SILLADAR.—A native trooper who furnishes his own horse and equipment.

SOLA.—A water-plant with a valuable pith, AESCHYNOMENE ASPERA.

SOWAR.—A mounted soldier or constable.

STUPA or tope.—A Buddhist tumulus, usually of brick or stone, and more or less hemispherical, containing relics.

SUBAH.—(1) A province under Mahomedan rule; (2) the officer in charge of a large tract in Baroda, corresponding to the Collector of a British District; (3) a group of Districts or Division, Hyderabad.

SUBAHDAR.—(1) The governor of a province under Mahomedan rule; (2) a native infantry officer in the Indian Army; (3) an official in Hyderabad corresponding to the Commissioner in British territory.

SUB-DIVISION.—A portion of a District in charge of a junior officer of the Indian Civil Service or a Deputy Collector.

SUPARI.—The fruit of the betel palm, ARECA CATECHU.

SUPERINTENDENT.—(1) The chief police officer in a District; (2) the official in charge of a hill station; (3) the official, usually of the Indian Medical Service, in charge of a Central Jail.

SURTI.—Native of Surat, specially used of persons of the Dhed or Mahar caste who work as house servants of Europeans, and whose house speech is Gujarati.

SYCE, sais.—A groom.

TABUT.—See TAZIAH.

TAHSIL.—A revenue sub-division of a District; syn. taluka, Bombay; taluka, Madras and Mysore; township, Burma.

TAHSILDAR.—The officer in charge of a tahsil; syn. Mamlatdar, Bombay; township officer or myo-ok, Burma; Mukhtiarkar, Sind; Vahivatdar, Baroda. His duties are both executive and magisterial.

TAKAVI.—Loans made to agriculturists for seed, bullocks, or agricultural improvements; syn. tagai, Bombay.

TALATI.—See Patwari.

TALAV, or talao.—A lake or tank.

TALUK, taluka.—The estate of a talukdar in Oudh. A revenue sub-division of a District, in Bombay, Madras and Mysore; syn. tahsil.

TALUKDAR.—A landholder with peculiar tenures in different parts of India. (1) An official in the Hyderabad State, corresponding to the Magistrate and Collector (First Talukdar) or Deputy Magistrates and Collectors (Second and Third Talukdars); (2) a landholder with a peculiar form of tenure in Gujarat.

TAMTAM, tumtum.—A North Indian name for a light trap or cart.

TANK.—In Southern, Western, and Central India, a lake formed by damming up a valley; in Northern India, an excavation holding water.

TAPEDAR.—See PATWARI.

TARAI.—A moist swampy tract; the term especially applied to the tract along the foot of the Himalayas.

TARI, toddy—The sap of the date, palmyra, or cocoanut palm, used as a drink, either fresh or after fermentation. In Northern India the juice of the date is called Sendhi.

TASAR, tussore.—Wild silkworms, ANTHERAEA PAPHIA; also applied to the cloth made from their silk.

TAZIA.—Lath and paper models of the tombs of Hasan and Husain, carried in procession at the Muharram festival; syn. tabut.

TEAK.—A valuable timber tree in Southern and Western India and Burma, TECTONA GRANDIS.

TELEGRAPHIC TRANSFERS.—See Council bills.

THAGI, thuggee.—Robbery after strangulation of the victim.

THAKUR.—(1) The modern equivalent of the caste name Kshattriya in some parts of Northern India; (2) a title of respect applied to Brahmans; (3) a petty chief; (4) a hill tribe in the Western Ghats.

THAMIN.—The brow-antlered deer Burma, CERVUS ELDI.

THANA.—A police station, and hence the circle attached to it.

TIKA.—(1) Ceremonial anointing on the forehead; (2) vaccination.

TIKAM.—The English pickaxe (of which the word is a corruption).

TIL.—An oilseed, SESAMUM INDICUM; also known as gingelly in Madras.

TINDAL, tandel.—A foreman, subordinate officer of a ship.

TIPAI, Teapoy.—A table with 3 legs, and hence used of any small European style table.

TOLA.—A weight equivalent to 180 grains troy).

TONGA.—A one or two horsed vehicle with a covered top. syn. SHIGHRAM.

TSINE.—Wild cattle found in Burma and to the southward, BOS SONDAICUS; syn. hsaing and banteng.

UNIT.—A term in famine administration, denoting one person relieved for one day.

URIAL.—A wild sheep in North-Western India, OVIS VIGNEI.

URID, UDID.—A pulse, 'black grain,' (PHASEOLUS MUNGO).

UMBAR.—A wild pig—(FICUS GLOMERATA).

USAR.—Soil made barren by saline efflorescence, Northern India.

VAHIVATDAR.—Officer in charge of a revenue sub-division, with both executive and magisterial functions, Baroda; syn. tahsildar.

VAID or baidya, Bengal.—A native doctor practising the Hindu system of medicine.

VAKIL.—(1) A class of legal practitioner; (2) an agent generally.

VIHARA.—A Buddhist monastery.

VILLAGE.—Usually applied to a certain area demarcated by survey, corresponding roughly to the English parish.

VILLAGE UNION.—An area in which local affairs are administered by a small committee.

WADA or WADI.—(1) an enclosure with houses built round facing a centre yard; (2) private enclosed land near a village.

WAKF.—A Muhammadan religious or charitable endowment.

WAO.—A step well.

WATAN.—A word of many senses. In Bombay Presidency used mostly of the land or cash allowance enjoyed by the person who performs some service useful for Govt. or to the village community.

WAZIR.—The chief minister at a Mahomedan court.

WET RATE.—The rate of revenue for land assured of irrigation.

YOGI.—A Hindu ascetic who follows the yoga system, a cardinal part of which is that it confers complete control over the bodily functions enabling the practiser, for instance to breathe in through one nostril and out at the other.

YUNANI.—Lit. Greek; the system of medicine practised by Mahomedans.

ZAMINDAR.—A landholder.

ZAMINDARI.—(1) An estate; (2) the rights of a landholder, zamindar; (3) the system of tenure in which land revenue is imposed on an individual or community occupying the position of a landlord.

ZANANA.—The women's quarters in a house hence private education of women.

ZIARAT.—A Mahomedan shrine, North-Western Frontier.

ZILA.—A District.

The New Capital.

The transfer of the capita of India from Calcutta to **Delhi** was announced at the Delhi Durbar on December 12, 1911. The reasons for it were stated in despatches between the Government of India and the Secretary of State published at the time. It had long been recognised as necessary, in the interests of the whole of India, to de-provincialise the Government of India, but this ideal was unattainable as long as the Government of India was located in one Province, and in the capital of that Province—the seat of the Bengal Government—for several months in every year. It was also desirable to free the Bengal Government from the close proximity of the Government of India which had been to the constant disadvantage of that Province. To achieve these two objects the removal of the capital from Calcutta was essential: its disadvantages had been recognised as long ago as 1868, when Sir Henry Maine advocated the change. Various places had been discussed as possible capitals, but Delhi was by common consent the best of them all. Its central position and situation as a railway junction, added to its historical associations, told in its favour; and, as Lord Crewe said in his despatch on the subject, "to the races of India, for whom the legends and records of the past are charged with so intense a meaning, this resumption by the Paramount Power of the seat of venerable Empire should at once enforce the continuity and promise the permanency of British sovereign rule over the length and breadth of the country."

The foundation stones of the new capital were laid by the King Emperor on December 15, 1911, when His Majesty said:—"It is my desire that the planning and designing of the public buildings to be erected will be considered with the greatest deliberation and care so that the new creation may be in every way worthy of this ancient and beautiful city." Subsequently a **town-planning committee** was appointed—consisting of Captain G. S. C. Swinton, Chairman, and Mr. J. A. Brodie and E. L. Lutyens, members—to advise on the choice of a site for, and the lay-out of, the capital. Mr. V. Lanchester was subsequently consulted by Government on some aspects of the question. The terms of their original engagement (subsequently renewed) were stated by the Under Secretary of State to be:—"The members of the committee will receive their travelling and living expenses, and the following fees for a five months' engagement:—Captain Swinton, 500 guineas; Mr. Brodie, 1,750 guineas; Mr. Lutyens, 1,500 guineas. The Secretary of State has also undertaken to refund to the Corporation of Liverpool the amount of Mr. Brodie's salary for the period of the absence."

Delhi and its environs.—In their first report, dated from Simla, 13th June 1912, the Committee explain that, in dealing with the choice of a site, they felt that the following considerations were paramount and must receive the closest and most continual attention:—(*a*) Health and sanitation, (*b*) water-supply and irrigation supply, (*c*) the provision of ample room for expansion, (*d*) an extent of land suitable for the location of buildings of various characters and sizes and for the provision of spacious parks and recreation grounds—To be assumed at 10 square miles for the new city and 15 square miles for the Cantonment—(*e*) Cost of land and the cost of executing necessary works on different sites, (*f*) facility for external and internal communication, (*g*) Civil and Military requirements.

On the east of the Jumna they found no suitable site. To the north of Delhi, on the west of the Jumna, where the Durbar camps were pitched they found some general advantages. The area is, for example, upwind and upstream from the present city of Delhi. The ruins and remains of the Delhis of the past do not cumber the ground. While the external communications might need improvement, the tract is fairly well served by existing railways. Roads and canals and the internal communication could be made convenient without excessive expenditure, and a good deal of money has already been spent on the area. But its disadvantages were found to be overwhelming. The site is too small and much of the land is liable to flooding. Similarly, the western slope of the hills to the south of Delhi the Naraiana plain was found unsuitable, mainly because it cannot be considered to be Delhi, is destitute of historical associations, and is shut out from all view of Delhi.

Southern site chosen.—The Committee finally selected a site on the eastern slopes of the hills to the south of Delhi, on the fringe of the tract occupied by the Delhis of the past. They describe it as follows:—"Standing a little to the Delhi side of the village of Malcha, just below the hills almost in the centre of the site, and looking towards the Jumna, Shahjahan's Delhi on the left fills the space between the ridge and the river. Following down from the present city on the foreshore of the riverain Firoz Shah's Delhi, the site of Indra Prastha, Humayun's fort, Humayun's tomb and Nizamuddin's tomb take the eye in a continuous progress to the rocky eminence on which Ghiyasuddin Tughlak erected his fortress city. On the right the Lal Kot, the Kutb, the Kila Rai Pithora, Siri and Jahanpanah complete the circle of the monuments of ancient Delhis. The mid space in the fore ground is filled by Safdar Jang's Mausoleum and the tombs of the Lodi dynasty, while to the left, towards Delhi, Jey Singh's gnomons and equatorial dials raise their fantastic shapes." The land chosen is free from liability to flood, has a natural drainage, and is not manworn. It is not cumbered with monuments and tombs needing reverent treatment, and the site is near the present centre of the town of Delhi.

Healthiness of Site.—In February, 1913, a Committee consisting of Surgn.-General Sir C. P. Lukis, Mr. H. T. Keeling, A.M I.C.E., and Major J. C. Robertson, I.M.S., was appointed to consider the comparative healthiness of the northern and southern sites. Their report, dated 4th March, 1913, states that "the Committee, after giving full consideration to the various points discussed in the above note, is bound to advise the Government of India that no doubt can exist as to the superior

healthiness of the southern site, the medical and sanitary advantages of which are overwhelming when compared with those of the northern site."

Report on Northern Site.—In the same month the Town-Planning Committee presented their second report, which dealt with the northern site. This had been elicited by the fact that in December, 1912, Sir Bradford Leslie, an engineer with a distinguished Indian career, had read a paper before the Indian section of the Royal Society of Arts in London, in which he set forth plans for building the new capital on the northern site and producing a fine water effect by a treatment of the river Jumna. This paper aroused considerable attention in England, and its publication synchronised with some letters and articles in the press in India expressing a preference for the northern site. The latter voiced a natural attraction to the north site which the Committee themselves experienced on their first visit to Delhi, and enunciated some predelictions which the Committee had at one time felt and later abandoned. The Town Planning Committee, therefore, undertook to review once more, and in greater detail, the arguments for and against the northern site. They came to the conclusion that:—"The soil is poor on the northern site as compared with the southern. The southern site is already healthy and has healthy surroundings. The northern site even after expenditure on sanitary requirements will never be satisfactory. If the northern site is to be made healthy, this involves going outside the site itself and making the neighbourhood healthy also. The building land to the south is generally good. On the north to be used at all it has in places to be raised at considerable cost. There is no really suitable healthy site for a cantonment in proximity to a city on the northern site. The exigencies of fitting in the requirements to the limited area of the northern site endanger the success of a lay-out as a whole and tend to make for cramping and bad arrangement. The result of placing a city on the northern site appears to the Committee to be the creation of a bad example in place of a good one."

Final Town-Planning Report.—The final report of the Town-Planning Committee, with a plan of the lay-out, was dated 20th March, 1913. The central point of interest in the lay-out, which gives the motif of the whole is Government House, the Council Chamber and the large blocks of Secretariats. This Government centre has been given a position at Raisina hill near the centre of the new city. Advantage is taken of the height of this hill and it is linked with the high ground behind so as to appear a spur of the ridge itself. Behind the hill a raised platform or forum would be built. This will be flanked by the large blocks of Secretariat buildings and terminated at its western end by the mass of Government House and the Council Chamber, with its wide flight of steps, portico and dome. The forum will be approached by inclined ways with easy gradients on both its north and south sides. The axis of the main avenue centres on the north-west gate of Indrapat nearly due east of Government House.

Looking from the eastern end of the forum where the broad avenue enters the Governmental centre and where the great stairways are set, the view is towards the east. "Right and left the roadways go and weld into one the empire of to-day with the empires of the past and unite Government with the business and lives of its people."

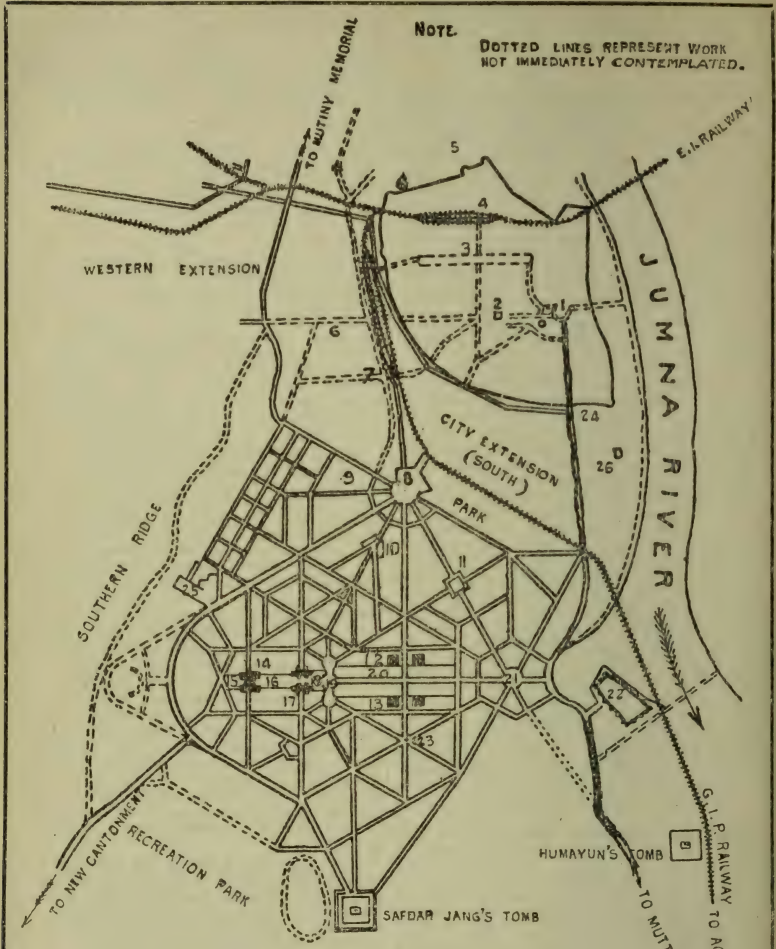
Behind Government House to the west will be its gardens and parks flanked by the general buildings belonging to the Viceregal estate. Beyond these again, on the ridge itself, will be a spacious amphitheatre to be made out of the quarry from which much of the stones for roads and buildings may be cut. Above this and behind it will lie the reservoir and its tower which will be treated so as to break the sky line of the ridge. To the east of the forum, and below it, will be a spacious forecourt defined by trees and linked on to the great main avenue or parkway which leads to Indrapat. Across this main axis, and at right angles to it, will run the avenue to the railway station. This will terminate in the railway station, the post office and business quarters at its northern end, and in the Cathedral at its southern extremity.

To the south-east will lie the park area in which stand the ancient monuments of Safdar Jang's Makhbara and the Lodi tombs. This area can be developed gradually as the city expands and has need of public institutions of various kinds. The axis running north-east from the Secretariat buildings to the railway station and towards the Jama Masjid will form the principal business approach to the present city. At the railway station a *place* will be laid out around which will be grouped the administrative and municipal offices, the banks, the shops and the hotels. On this *place* the post office is placed in symmetrical relation to the railway station.

The processional route will lead down from the railway station, due south to the point where it is intersected by the main east to west axis. Here round a *place* will be gathered the buildings of the Oriental Institute, the Museum, the Library and the Imperial Record Office. To the south-west of the railway station will lie the houses of the local administration and the residences of the European clerks

Due south of the forum the residence of the Commander-in-Chief will be placed. Round about the Viceregal estate and the forum lies the ground destined for the residences of the Members of Council, the Secretaries and other officials of the Government of India. To the south-west of Government House lies the club. To the south of the club a low ridge divides the tract into two portions. That to the west is well adapted for a golf-course, while the eastern side is designed for a race-course, the ridge itself offering unusual facilities for locating stands and seeing the races.

Communications.—The avenues range from 300 feet to 600 feet with the exception of the main avenue east of the Secretariat buildings where a parkway width of 440 feet has been allowed. The principal avenues in addition to the main avenues are those running at right angles to the main east to west axis



1. KING EDWARD VII MEMORIAL
2. JAMA MASJID
3. CHANDNI CHAUK
4. DELHI MAIN JOINT STATION
5. KASHMIR GATE
6. INTERMEDIATE CITY EXTENSION
7. PROPOSED NEW RY: STATION
8. STATE ENTRANCE TO RY: STATION
9. LADY HARDINGE'S COLLEGE & HOSPITAL FOR WOMEN
10. JANTAR MANTAR
11. UNIVERSITY
12. RECORD OFFICE
13. ETHNOLOGICAL MUSEUM
14. GOVERNMENT HOUSE
15. MOGHAL GARDEN WEST OF GOVERNMENT HOUSE
16. VICEROY'S COURT
17. SECRITARIAT BUILDINGS (IN TWO BLOCKS)
18. GOVERNMENT COURT
19. GREAT PLACE
20. CENTRAL VISTA
21. SITE FOR PROPOSED MONUMENT AT EAST OF VISTA.
22. PURANA KILA
23. CATHEDRAL SITE
24. DELHI GATE
25. TAL-KATORA GARDEN
26. FEROZ SHAH KOTLA

Others form part of a system running from the amphitheatre to the railway station and Commander-in-Chief's residence, and from both the latter to the commemorative column, lying on the axis between Indrapat and Government House is the focal point of the roads and avenues on the parkway.

A lake which can be obtained by river treatment is shown on the plan. The lay-out has been made independent of the water effect, but the Committee think that its ultimate creation will enhance enormously the beauties and general amenities of the new capital: and it should and would become an integral portion of the design now submitted.

The report contains lengthy recommendations concerning water-supply, drainage, sewage system, parks and communications. It is imperative, it says:—"that a complete scheme of railway arrangements designed to serve the whole of the capital, both old and new, should be an essential feature of the lay-out of the Imperial City, and this important matter should not be left to be settled when it is too late to deal with it." The main lines of the lay-out as projected by the Committee have been accepted by Government. The expenses of the new central station and the difficulty experienced in meeting the various railway interests concerned will necessitate the postponement of this part of the scheme, and it has been decided that the needs of New Delhi will be met by a diversion of the existing Agra-Delhi Chord Railway to a line drawn eastward of Humayun's Tomb and Purana Killa and the construction of a new through station near the site of the proposed Central station. Another important modification consists in the reservation of the area lying south of the Delhi and Ajmere Gates of the city for the purpose of the extension of Old Delhi.

Nor is it now proposed to give effect to the extensive scheme of river training designed by the Town Planning Committee; and it is probable that little more will be done in this direction than to create a lake immediately at the end of the central vista and alongside the walls of Indrapat.

Temporary Capital.—For the use of the Government of India during the period of the building of the new capital—a period that will have to be extended owing to the conditions created by the war—an area has been selected along the Alipur Road, between the present civil station of Delhi and the Ridge. The early idea that many of the officials should live under canvas had to be given up, and there are now temporary offices and residences. The architecture and method of construction are similar to those adopted in the exhibition buildings at Allahabad in 1910; but the buildings are expected to outlast the transitional period for which they are intended. They will subsequently be an asset of some value, the site they occupy becoming a suburb of the capital.

Chief Commissioner Appointed.—On October 1, 1912, by proclamation, there was constituted an administrative **enclave of Delhi** under a Chief Commissioner, Mr. W. M. Hailey, I.C.S. The Delhi district of the Punjab, from which this enclave was entirely taken, consisted of three tahsils or subdivisions and the enclave was formed by the central tahsil, that of Delhi, and by such part of the southern tahsil, Ballabgarh, as was comprised within the limits of the police post of Mahrauli. Delhi Province has an area of 528 square miles to which has recently been added an area of 45 square miles to the east of the Jumna river to serve as a grazing ground for the cattle for the city. The total area is, therefore, 573 square miles. On the basis of the Census of 1911, the population of the area originally included in the Province is 3,98,269 and of the new area 14,552, or a total of 4,12,821. The population of the Municipal town of Delhi is 2,29,144.

The Architects' Designs.—At the Royal Academy in 1914 there were exhibited drawings by Mr. Lutyens and Mr. Baker, which, though provisional and rather in the nature of what are called Warrant Designs, show how the architectural problems of the new capital are to be solved. Government House and the Secretariat have been planned by them as one block, as it were a Capital, facing towards Indrapat. The **Secretariat** is to be built on the rock of Raisina hill, the top of which has been levelled for the purpose: behind the Secretariat is to be a raised causeway forming the approach to Government House: and Government House itself is to be built on a high basement constructed on an outcrop of rock. The main processional route to Government House is to be along a sloping way (at a gradient of one in 22½) which leads from a semi-circular piazza, the "Great Court" to the level of the Secretariat buildings.

At the summit of this sloping way is the "**Government Court**", a space of about 1,100 feet in length, and 400 in breadth, flanked to the north and south by the two blocks of Secretariat buildings. These buildings have been designed by Mr. Baker and the aggregate cost will be some £750,000. According to the design the eastern end of each block is marked by deep loggias looking out over the central vista. In the centre of each block is a dome. In the case of the north block this marks an entrance hall: in the south block it surmounts a Conference hall with a suite of cloak and reception rooms. Each block contains three floors: in the lowest are motor garages, godowns, and record rooms: in the middle floor are the offices of Members, Secretaries and other officers: in the top floor are clerks' rooms. An essential feature of the design, and one which sets the character of the whole building, is the provision of loggias and recessed gateways or exedrae giving views through to the fountain courts situate in the interior of the blocks. The verandah so familiar in Indian buildings is altogether absent. The architect relies for control of temperature on thick external walls, together with the thick window shutters adopted so widely in Southern Europe, and the wide *chajja* characteristic of Oriental buildings.

Between the north and south Secretariat blocks, is the way into the "**Viceroy's Court**"—the raised causeway already referred to—leading up to Government House. The Court is about 600 feet in breadth and 1,300 feet in length; it will be treated with grass and waterways and low trees: and should form a dignified approach to the final group of buildings

At a point midway in the causeway, at which will be erected a column presented by the Maharajah of Jaipur, roads lead off to the north and south, forming alternative lines of approach to Government House.

One thus reaches the portico of **Government House.** This portico is raised some twenty feet above the causeway and fifty feet above the surrounding country. The house itself centres round the great Durbar Hall, a domed structure which dominates the scheme of the buildings surrounding it. Grouped round the Durbar Hall are the State rooms and great stairways from the entrance courts on the north and south sides. In the right wing is the Chamber of the Legislative Council of the Governor-General and offices for its Members. In April 1912, the Under Secretary of State indicated in Parliament the decision that this Chamber should be attached to the residence of the Governor-General. It has, therefore, been included in the design of Government House, but it has been assigned a separate approach through a spacious avenue of its own. The left wing contains the private suites. In the rear of the house will be a raised garden, walled and terraced after the manner of the Moghuls, and behind that again, on the level of the surrounding country, a park which will contain the staff houses and quarters. The park will lead up to the rocky slopes of the Ridge which closes in the vista on the west. The house, which has been designed by Mr. Lutyens, will, with its attached quarters, garden and park, and with the Legislative Council wing, cost approximately £500,000.

Style of Architecture.—There had been a prolonged "battle of the styles" over Delhi and if these designs gave satisfaction to neither of the extreme and opposed schools of thought, they clearly showed an endeavour to apply, with due regard for Indian sentiment, the spirit and essence of the great traditions of architecture to the solution of structural problems conditioned upon an Indian climate and Indian surroundings and requirements. To use the language of the architects themselves, it has been their aim "to express, within the limit of the medium and of the powers of its users, the ideal and the fact of British rule in India, of which the New Delhi must ever be the monument."

The inspiration of these designs is manifestly Western, as is that of British rule, but they combine with it distinctive Indian features without doing violence to the principles of structural fitness and artistic unity. Much will depend upon the resourcefulness and ability of the Indian artificers themselves whom the Government of India proposes to bring together in Delhi to give expression, by their decorative work, to the best traditions of skilled Indian craftmanship.

Cost of the Scheme.—It was at first tentatively estimated that the cost of the new capital would be four million sterling and that sum was given in the original despatch of the Government of India on the subject. A revised estimate was given by H. E. the Viceroy in Council in March 1914. That estimate is as follows :—

(*a*) Salaries and Allowances, Rs. 70,18,700.

(*b*) Travelling Allowances of Officers and Establishments, Rs. 6,30,000.

(*c*) Supplies, Services and Contingencies Rs. 3,78,600.

(*d*) Works Expenditure, (1) Buildings Rs. 3,59,87,200, (2) Communications Rs. 29,91,800, (3) Parks and Public Improvements, Rs. 27,34.500, (4) Electric Light and Power, Rs.43,40,700 (5) Irrigation, Rs. 27,49,000, (6) Water Supply, Sewerage, Drainage, etc. Rs. 73,77,900. (7) Purchase of Tools and Plant, Rs. 35,50,600, (8) Survey Camps and General Preliminary Expenditure, Rs. 42,82,100, (9) Maintenance during Construction Rs. 20,09,000.

(*e*) Acquisition of Land taken up Rs. 36,48,200.

(*f*) Other Miscellaneous Expenditure Rs. 6,000.

Deduct anticipated recovery from tools and plant, Rs. 10,00,000.

These figures when added up make an **aggregate total** of Rs. 7,67,04,300, or £5,113,620 but said His Excellency, "as we are anxious to face our liabilities for starting the new City to the fullest extent possible we consider it necessary to make a special provision for contingencies and unforeseen expenditure in excess of the usual provision that has been made of 5 per cent. on the works outlay, by adding a sum of one and a half crores or £1,000,000. We have accordingly a very large reserve to meet future possibilities, which we are not able to foresee at present. I should add that the expenditure of this additional crore and a half on unforeseen contingencies will be strictly controlled by the Government of India and no part of it spent unless absolutely necessary. On the other hand the project estimate contains certain items such as land, residences, water supply, electric power, irrigation, on which recoveries in the form of rent or taxes will in addition to meeting current expenditure partially at any rate cover the interest on capital outlay, while there are other items on which some return account of the sale of leases, general taxes, and indirect receipts may be expected."

Progress of the work.—The construction of New Delhi is making satisfactory progress having regard to the curtailment of the Budget allotment, in consequence of the war.

A portion of the Indian clerks' quarters and the menials' quarters has been completed, and bungalows have been provided for the occupation of the works staff. Experimental bungalows for the higher officials, in the neighbourhood of Government House, have been completed and some were occupied in 1918.

Meanwhile the central point of interest in the plan has been given careful detailed consideration by the Government and the architects. The basements of Government House and the large blocks of Secretariats by which it will be

lanked have been completed ; substantial progress has been made with the side court f the Secretariat buildings; and the raised Court between the Secretariat and Government House is so far advanced that the tree planting nd provision of waterways is about to be aken in hand. An indication of the progress at he Governmental centre on Raisina Hill was seen n the Royal Academy, where the statues of their Majesties in Coronation robes, which are to be laced in front of Government House, have been xhibited. That of the King, by Mr. Mackenna, s the gift of the Maharaja Scindia of Gwalior. nd that of the Queen, by Sir George Frampton, s the gift of the Maharaja of Bikanir. The een interest of the ruling princes in the transfer f the capital, which is very welcome to them, s further shown in the gift by the Maharaja f Jaipur of the commemorative column in he central avenue. The column, surmounted y the Star of India, will be well seen from the Great Place" leading to the central avenue.

Two Cathedral Schemes.—In October 1913 letter was published in *The Times* from the lishop of Calcutta on the provision of a Cathedral at Delhi. He appealed for £50,000 in addion to any grant given by the Government, nd quoted in his letter the following statement f approval by the King-Emperor: "I heartily pprove of the project to build a Cathedral in he new city of Delhi. I trust that the appeal or the necessary funds may meet with a geneous response, so that in due time the capital f India may possess a Cathedral which in design nd character will testify to the life and energy f the Anglican Church and be worthy of its rchitectural surroundings both of days gone y and of those to come." His Majesty subcribed £100 and the Queen £50 to the fund. he Indian Church Aid Association have reeived several contributions towards the buildng fund for the proposed Cathedral Church, in esponse to the appeal of the Bishop of Calcutta. heques may be sent to the Secretary, Indian Church Aid Association, Church House, Westminster, S. W. and crossed Lloyds Bank, St. James's Street, S. W.

A Roman Catholic Cathedral is also projected and Father Paul Hughes, O.M.C., has been touring India collecting money for the Cathedral Fund.

Suggested War Memorial.—Suggestions have been made for completing the central avenue, sited upon Indrapat, by a stately colonnade, entered by three large gateways, to commemorate the Indian heroes of the war. The separate bays would be utilized for distinct memorials, regimental or communal, so that Hindu and Mahomedan, Sikh and Gurkha, Jat and Mahratta would have their respective niches.

Sanitary Improvements.—While the work on the new city has been going forward various improvements in the existing Delhi have been carried out and the sanitary conditions in particular have been much improved. The fly nuisance which was extremely bad in Delhi has been much reduced, and other schemes have been formulated as the result of a sanitary survey which embraced the whole of the city. The most tangible results of these effects is seen in the consistent fall in the death-rate, and the acknowledged reduction in the amount of sickness in Delhi.

Higher College for Chiefs.—It was proposed during 1914 that a higher college for Chiefs should be established at Delhi and in this connexion a conference of Chiefs and Political Officers was held at Delhi, in March, at which the Viceroy presided. It was subsequently announced that subscriptions offered towards the college amounted to about ten and a half lakhs, various recurring sums were promised, and the Government of India also promised to recommend the Secretary of State a grant of Rs. 50,000 a year. Thus the whole capital would come to 12½ lakhs. The proposal is still under consideration.

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Customs Tariff.

The customs revenue is mainly derived from the general import duty, certain special impo duties such as those on arms, liquors, sugar, petroleum and tobacco, and an export duty on ri General import duties, which were abolished in 1882, were reimposed in 1894, since which da the general rate of duty on commodities imported into British India by sea has been 5 per ce *ad valorem*. Cotton was exempted in 1894 when the general duties were received; in Decemb 1894 a 5 per cent. duty *ad valorem* was imposed on imported cotton goods and yarns, while an exc duty of 5 per cent was imposed on all yarns of counts above 20 spun at power mills in Briti India; in February 1896 cotton yarns and threads imported or manufactured in India were fre from duty, while a uniform 3½ per cent. *ad valorem* duty was imposed on all woven cotton goo imported or manufactured in India at power mills. The products of hand looms are exempt The gross revenue from imports, salt excluded, in 1915-16, was Rs. 7,35,31,000. The estimat gross revenue from this source for 1916-17 is Rs. 8,89,20,000.

The Chief **alterations in the tariff**, which came into force on March 1, 1916, a as follows :—

Goods which before have been dutiable at the rate of 5 per cent. now pay 7½ per cent. *ad valore* Machinery, which (with the exception of cartridge-making machinery and machines worked animal or manual labour) was formerly free, is subject to a duty of 2½ per cent. *ad valorem*, b machinery for cotton spinning and weaving mills remains duty free, as do cotton yarn and thre Cotton manufactures remain dutiable as before at the rate of 3½ per cent. *ad valorem*. Railw material and ships are to pay 2½ per cent., and coal a specific duty of 8 annas per ton. Iron a steel in bars, plates, sheets, and other manufactured forms, formerly dutiable at 1 per cent. now to pay 2½ per cent. The rates for silver and petroleum remain as before, but silver plate a silver thread are to pay 15 per cent. The sugar duty is raised from 5 to 10 per cent., and considera increases have also been made in the rates leviable on alcoholic liquors and tobacco. In additi export duties have been placed on tea and jute.

Schedule II—(Import Tariff).

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco.			
	FISH.		Rs. a.	
1	FISH, SALTED, wet or dry	Indian maund of 82⅔ lbs. avoirdupois weight.	....	Such rate rates of du not exce ing twe annas as t Governor- General Council ma by notific tion in t *Gazette India*, fro time to ti prescribe.
2	FISHMAWS, including singally and sozille, and sharkfins.	....	*Ad valorem*	7½ per cen
3	FISH, excluding salted fish (see No. 1)	....	„	7½ „ „
	FRUITS AND VEGETABLES.			
4	FRUITS AND VEGETABLES, all sorts, fresh, dried, salted or preserved—			
	Almonds without shell	cwt.	87 0	7½ per cen
	„ in the shell	„	24 0	7½ „ „
	„ kàgazi .. { Persian	„	85 0	7½ „ „
	„ kàgazi .. { European	„	48 0	7½ „ „
	Cashew or cajoo kernels	„	16 0	7½ „ „
	Cocoanuts, Straits	thousand.	75 0	7½ „ „
	„ other	„	54 0	7½ „ „
	„ kernel (khopra)	cwt.	15 0	7½ „ „

Schedule II—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco—*contd.*			
	FRUITS AND VEGETABLES—*contd.*		Rs. a.	Rs. a. p.
4	FRUITS AND VEGETABLES, all sorts, fresh, dried, salted or preserved—*contd.*			
	Currants	cwt.	50 0	7½ per cent.
	Dates, dry, in bags	,,	9 0	7½ ,, ,,
	,, wet, in dry baskets and bundles ..	,,	6 0	7½ ,, ,,
	,, ,, in pots, boxes, tins and crates ..	,,	10 0	7½ ,, ,,
	Figs, Persian, dried..	,,	22 0	7½ ,, ,,
	Garlic	,,	7 0	7½ ,, ,,
	Pistachio nuts	,,	60 0	7½ ,, ,,
	Prunes, Bussora (Alu-Bokhara)	....	*Ad valorem*	7½ ,, ,,
	Raisins, black	....	,,	7½ ,, ,,
	,, kishmish, Persian Gulf..	....	,,	7½ ,, ,,
	,, Munukka ,, ,, ...	cwt.	20 0	7½ ,, ,,
	,, other sorts	....	*Ad valorem*	7½ ,, ,,
	Walnuts, all descriptions..	....	,,	7½ ,, ,,
	All other sorts of fruits and vegetables, fresh, dried, salted or preserved.	....	,,	7½ ,, ,,
	GRAIN, PULSE AND FLOUR.			
5	GRAIN AND PULSE, all sorts, including broken grain and pulse, but excluding flour (see No. 6).	....	,,	2½ ,, ,,
6	FLOUR	....	,,	7½ ,, ,,
	LIQUORS.			
7	ALE, Beer, and Porter	Imperial gallon or 6 quart bottles	....	0 4 6
8	CIDER and other fermented liquors	,,	....	0 4 6
9	LIQUEURS, Cordials, Mixtures and other preparations containing spirit—			
	(*a*) Entered in such a manner as to indicate that the strength is not to be tested.	,,	....	14 10 0
	(*b*) If tested	Imperial gallon or 6 quart bottles of the strength of London proof.	....	11 4 0 and the duty to be increased or reduced in proportion as the strength of the spirit exceeds or is less than London proof.
10	PERFUMED SPIRITS	Imperial gallon or 6 quart bottles.	....	18 12 0
11	SPIRIT, which has been rendered effectually and permanently unfit for human consumption.	....	*Ad valorem*	7½ per cent.

Schedule II—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco—*contd.*			
	LIQUORS—*contd.*			
12	All other sorts of SPIRIT	Imperial gallon or 6 quart bottles of the strength of London proof.	Rs. a p.	Rs. a. p. 11 4 0 and the du to be i creased reduced proport i o as t h strength the spi exceeds is less thi L o n d o proof.
13	WINES—			
	Champagne and all other sparkling wines not containing more than 42 per cent. of proof spirit.	Imperial gallon or 6 quart bottles.	....	4 6 0
	All other sorts of wines not containing more than 42 per cent. of proof spirit. Provided that all sparkling and still wines containing more than 42 per cent. of proof spirit shall be liable to duty at the rate applicable to "All other sorts of Spirit."	,,	....	1 12 2
	PROVISIONS AND OILMAN'S STORES.			
14	VINEGAR, in casks	....	*Ad valorem*	2½ per cen
15	PROVISIONS, OILMAN'S STORES, AND GROCERIES, all sorts, excluding vinegar in casks (see No. 14)—			
	Bacon	....	,,	7½ ,, ,,
	Beef and Pork	....	,,	7½ ,, ,,
	Béche de mer	....	,,	7½ ,, ,,
	Butter	lb.	2 0	7½ ,, ,,
	Cassava, Tapioca or Sago	cwt.	14 0	7½ ,, ,,
	Cheese	....	*Ad valorem*	7½ ,, ,,
	China preserves in syrup	Box of 6 large or 12 small jars.	7 0	7½ ,, ,,
	,, ,, dry, candied	lb.	0 6	7½ ,, ,,
	Cocum	cwt.	8 0	7½ ,, ,,
	Ghi	,,	100 0	7½ ,, ,,
	Margarine	....	*Ad valorem*	7½ ,, ,,
	Vinegar not in casks—			
	Persians	....	,,	7½ ,, ,,
	Indian	....	,,	7½ ,, ,,
	All other sorts of provisions, oilman's stores and groceries.	....	,,	7½ ,, ,,

Schedule II—(Import Tariff)—*continued.*

No.	Name of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco—*contd.*			
	SPICES.			
16	SPICES, all sorts—		Rs. a.	
	Betelnuts, raw, whole, split, or sliced, from Goa.	cwt.	11 8	7½ per cent.
	,, ,, ,, ,, ,, ,, Straits	,,	10 0	7½ ,, ,,
	,, ,, ,, ,, ,, ,, boiled.	,,	20 0	7½ ,, ,,
	,, whole, from Ceylon	,,	12 8	7½ ,, ,,
	,, raw, split (sun-dried), from Ceylon	,,	30 0	7½ ,, ,,
	,, all other sorts	....	*Ad valorem*	7½ ,, ,,
	Chillies, dry	cwt.	15 0	7½ ,, ,,
	Cloves	,,	46 0	7½ ,, ,,
	,, exhausted	,,	14 0	7½ ,, ,,
	,, stems and heads	,,	6 0	7½ ,, ,,
	,, in seeds, nariavang	,,	13 0	7½ ,, ,,
	Ginger, dry	,,	21 0	7½ ,, ,,
	Mace	lb.	1 2	7½ ,, ,,
	Nutmegs	,,	0 8	7½ ,, ,,
	,, in shell	,,	0 4	7½ ,, ,,
	Pepper, black	cwt.	46 0	7½ ,, ,,
	,, white	,,	60 0	7½ ,, ,,
	All other sorts of spices	....	*Ad valorem*	7½ ,, ,,
	SUGAR.			
17	CONFECTIONERY	....	,, ,,	7½ ,, ,,
18	SUGAR, all sorts, including Molasses and Saccharine produce of all sorts, but excluding confectionery (see No. 17)—			
	Sugar, crystallised, beet	cwt.	18 8	10 ,, ,,
	,, ,, and soft, refined in China	,,	19 8	10 ,, ,,
	,, ,, ,, ,, from Egypt ..	,,	16 0	10 ,, ,,
	All other sorts of Sugar—			
	Sugar, crystallised and soft, from Java, or Japan, 23, Dutch standard and above.	,,	17 8	10 ,, ,,
	,, ,, ,, from Java or Japan, 16 to 22 Dutch standard.	,,	15 12	10 ,, ,,
	,, ,, ,, from Java or Japan, 15 Dutch standard and under.	,,	13 12	10 ,, ,,
	,, ,, ,, from Mauritius, equal to 16 Dutch standard and over.	,,	17 4	10 ,, ,,
	Molasses from Java	,,	2 8	10 ,, ,,
	,, ,, other countries	,,	2 8	10 ,, ,,
	Sugar, all other sorts, including saccharine produce of all kinds.	....	*Ad valorem*	10 ,, ,,
	TEA.			
19	TEA—			
	Tea, black	lb.	0 12	7½ ,, ,,
	,, green	,,	0 11	7½ ,, ,,

Schedule II—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco—*contd.*			
	OTHER FOOD AND DRINK.		Rs. a.	Rs. a. p.
20	COFFEE..	cwt.	55 0	7½ per cent.
21	HOPS	....	....	Free.
22	SALT	Indian maund of 82⅔ lbs. avoirdupois weight.	....	The rate at which excise duty is for the time being leviable on salt manufactured in the place where the import takes place.
23	SALT imported into British India and issued, in accordance with rules made with the previous sanction of the Governor-General in Council, for use in any process of manufacture ; also salt imported into the port of Calcutta and issued with the sanction of the Government of Bengal to manufacturers of glazed stoneware ; also salt imported into any port in the provinces of Bengal and Bihar and Orissa and issued, in accordance with rules made with the previous sanction of the Governor-General in Council, for use in curing fish in those provinces.	....	....	Free.
24	ALL OTHER SORTS OF FOOD AND DRINK not otherwise specified.	....	*Ad valorem*	7½ per cent.
	TOBACCO.			
25	TOBACCO, unmanufactured	lb.	....	1 0 0
26	CIGARS AND CIGARETTES	....	*Ad valorem*	50 per cent.
27	All other sorts of TOBACCO, manufactured.. ..	lb.	....	1 8 0
	II.—Raw Materials and produce and articles mainly unmanufactured.			
	COAL, ETC.			
28	COAL, COKE AND PATENT FUEL	Ton.	....	0 8 0
	GUMS, RESINS AND LAC.			
29	GUMS, RESINS AND LAC, all sorts—			
	Copal	....	*Ad valorem*	7½ per cent.
	Cutch and gambier (natural)	cwt.	42 0	7½ ,, ,,
	Gamboge	lb.	1 12	7½ ,, ,,
	Gum Ammoniac	cwt.	25 0	7½ ,, ,,
	,, Arabic	,,	23 0	7½ ,, ,,
	,, Bdellium	....	*Ad valorem*	7½ ,, ,,
	,, Benjamin, ras	cwt.	42 0	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff valuation.	Duty.
	II.—Raw Materials and produce and articles mainly unmanufactured —*contd.*		Rs. a.	Rs. a. p.
29	GUMS, RESINS AND LAC, all sorts—*contd.*			
	Gun Benjamin, cowrie..	cwt.	80 0	7½ per cent.
	,, Bysabol (coarse myrrh)	,,	36 0	7½ ,, ,,
	,, Olibanum of frankincense	....	12 0	7½ ,, ,,
	,, Persian (false)	cwt.	11 0	7½ ,, ,,
	Myrrh	,,	40 0	7½ ,, ,,
	Rosin	,,	20 0	7½ ,, ,,
	All other sorts of gums, gum-resins, and articles made of gum or gum-resin.	....	*Ad valorem*	7½ ,, ,,
	HIDES AND SKINS, RAW.			
30	HIDES AND SKINS, raw or salted..	....	....	Free.
	METALLIC ORES, AND SCRAP IRON OR STEEL FOR RE-MANUFACTURE.			
31	IRON OR STEEL, old..	cwt.	3 0	2½ per cent.
32	METALLIC ORES, all sorts	....	*Ad valorem*	7½ ,, ,,
	OILS.			
33	PETROLEUM, including also naptha and the liquids commonly known by the names of rock-oil, Rangoon-oil, Burma oil, kerosine, paraffin oil, mineral oil, petroline, gasoline, benzol, benzoline, benzine, and any inflammable liquid which is made from petroleum, coal, schist, shale, peat or any other bituminous substance, or from any products of petroleum, but excluding the following classes or petroleum.	Imperial gallon.	....	0 1 6
	Petroleum which has its flashing point at or above two hundred degrees of Fahrenheit's thermometer and is proved to the satisfaction of the Collector of Customs to be intended for use exclusively for the batching of jute or other fibre, or for lubricating purposes.	....	*Ad valorem*	7½ per cent.
	Petroleum which has its flashing point at or above one hundred and fifty degrees of Fahrenheit's thermometer and is proved to the satisfaction of the Collector of Customs to be intended for use exclusively as fuel or for some sanitary or hygienic purpose.	....	,,	7½ ,, ,,
4	All other sorts of animal, essential, mineral, and vegetable non-essential OILS—			
	Cocoanut oil	cwt.	26 0	7½ ,, ,,
	All other sorts of oil	....	*Ad valorem*	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	II.—Raw materials and produce and articles mainly unmanufactured—*contd.*		Rs. a.	
	SEEDS.			
35	OIL-SEEDS, imported into British India by sea from the territories of any Native Prince or Chief in India.	....	....	Free.
36	SEEDS, all sorts, excluding oil-seeds specified in No. 35.	....	*Ad valorem*	7½ per cent.
	TALLOW, STEARINE AND WAX.			
37	TALLOW AND STEARINE, including grease and animal fat, and WAX of all sorts, not otherwise specified.	....	,,	7½ ,, ,,
	TEXTILE MATERIALS.			
38	COTTON, raw	....	....	Free.
39	WOOL, raw	....	....	,,
40	TEXTILE MATERIALS, the following:—			
	Silk waste and raw silk including cocoons—			
	Bokhara	lb.	7 0	7½ per cent
	Floss	....	*Ad valorem*	7½ ,, ,,
	Raw silk—Yellow Shanghai, including re-reeled.	lb.	6 0	7½ ,, ,,
	Yellow from Indo-China, and places in China other than Shanghai including re-reeled.	,,	6 0	7½ ,, ,,
	Mathow	,,	4 0	7½ ,, ,,
	Panjam	,,	3 4	7½ ,, ,,
	Persian	,,	4 8	7½ ,, ,,
	Siam	,,	4 0	7½ ,, ,,
	White Shanghai, Thonkoon or Duppion.	,,	4 0	7½ ,, ,,
	,, ,, other kinds including re-reeled.	,,	6 8	7½ ,, ,,
	,, other kinds of China, including re-reeled.	,,	8 0	7½ ,, ,,
	Waste and Kachra	....	*Ad valorem*	7½ ,, ,,
	All other sorts, including cocoons	....	,,	7½ ,, ,,
	Raw Flax, Hemp, Jute and all other unmanufactured textile materials not otherwise specified.	....	,,	7½ ,, ,,
	WOOD AND TIMBER.			
41	FIREWOOD	....	,,	2½ ,, ,,
42	WOOD AND TIMBER, all sorts, not otherwise specified, including all sorts of ornamental wood.	....	,,	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation. Rs. a.	Duty.
	II.—Raw materials and produce and articles mainly unmanufactured—*contd.*			
	MISCELLANEOUS.			
43	CANES AND RATTANS	....	*Ad valorem*	7½ per cent.
44	COWRIES AND SHELLS, including Tortoise-shell—			
	Chanks—large shells, for cameos	....	,,	7½ ,, ,,
	,, white, live	....	,,	7½ ,, ,,
	,, ,, dead	....	,,	7½ ,, ,,
	Cowras	....	,,	7½ ,, ,,
	Cowries, bazar, common	cwt.	4 0	7½ ,, ,,
	,, yellow, superior quality	,,	5 0	7½ ,, ,,
	,, Maldive	,,	7 0	7½ ,, ,,
	,, Sankhli	,,	110 0	7½ ,, ,,
	Mother-of-pearl, nacre	....	24 0	7½ ,, ,,
	Nakhla	cwt.	145 0	7½ ,, ,,
	Tortoise-shell	lb.	9 0	7½ ,, ,,
	,, nakh	,,	5 0	7½ ,, ,,
	All other sorts, including articles made of shell, not otherwise described.	....	*Ad valorem*	7½ ,, ,,
45	IVORY, unmanufactured—			
	Elephant's grinders	cwt.	300 0	7½ ,, ,,
	,, tusks (other than hollows, centres, and points), each exceeding 20 lb. in weight, and hollows, centres, and points each weighing 10 lb. and over.	,,	850 0	7½ ,, ,,
	Elephants' tusks (other than hollows, centres and points), not less than 10 lb. and not exceeding 20 lb. each, and hollows, centres, and points each weighing less than 10 lb.	,,	750 0	7½ ,, ,,
	Elephants' tusks, each less than 10 lb. (other than hollows, centres, and points).	,,	450 0	7½ ,, ,,
	Sea-cow or moye teeth, each not less than 4 lb..	cwt.	200 0	7½ ,, ,,
	Sea-cow or moye teeth, each not less than 3 lb. and under 4 lb.	,,	170 0	7½ ,, ,,
	Sea-cow or moye teeth, each less than 3 lb. ..	,,	120 0	7½ ,, ,,
	All other sorts unmanufactured not otherwise specified.	,,	*Ad valorem*	7½ ,, ,,
46	MANURES, all sorts, including animal bones and the following chemical manures:—Basic slag, nitrate of soda, muriate of potash, sulphate of potash, kainit salts, nitrate of lime, calcium cyanamide and mineral superphosphates.	....	....	Free.
47	PRECIOUS STONES AND PEARLS, unset *	....	*Ad valorem*	7½ per cent.
48	PULP OF WOOD, RAGS and other paper-making materials.	....	....	Free.
49	ALL OTHER RAW MATERIALS, and produce and articles mainly unmanufactured, not otherwise specified.	....	*Ad valorem*	7½ per cent.

* Pearls unset have been exempted by executive order from payment of duty.

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured.			
	APPAREL.			
50	APPAREL, including drapery, boots and shoes, and military and other uniforms and accoutrements, but excluding uniforms and accoutrements exempted from duty (No. 51) and silver thread (No. 90).	....	*Ad valorem*	7½ per cent.
51	UNIFORMS AND ACCOUTREMENTS appertaining thereto, imported by a public servant for his personal use.	....	....	Free.
	ARMS, AMMUNITION AND MILITARY STORES.			
52	Subject to the exemptions specified in No. 55, ARMS, AMMUNITION AND MILITARY STORES, that is to say,—			Rs. a.
	(1) Firearms other than pistols, including gas and air guns and rifles.	Each.	....	50 0
	(2) Barrels for the same, whether single or double.	,,	....	30 0
	(3) Pistols	,,	....	15 0
	(4) Barrels for the same, whether single or double.	,,	....	10 0
	(5) Main springs and magazine springs for firearms, including gas, guns and rifles.	,,	....	8 0
	(6) Gun stocks and breech blocks	,,	....	5 0
	(7) Revolver cylinders, for each cartridge they will carry.	,,	....	2 8
	(8) Actions (including skeleton and waster), breech bolts and their heads, cocking pieces, and locks (for muzzle-loading arms).	,,	....	1 8
	(9) Machines for making loading or closing cartridges for rifled arms.	,,	....	10 0
	(10) Machines for capping cartridges for rifled arms.	,,	....	2 8
				} or 20 per cent. *ad valorem* whichever is higher.
	Proviso 1.—No duty in excess of 20 per cent. *ad valorem* shall be levied upon any of the articles specified in items Nos. 1 to 10 of this entry when they are imported in reasonable quantity, for his own private use, by any person lawfully entitled to possess the same.			
	Proviso 2.—When any articles which have been otherwise imported and upon which duty has been levied or is leviable under items Nos. 1 to 10, are purchased retail from the importer by a person lawfully entitled as aforesaid, in reasonable quantity for his own private use, the importer may apply to the Collector of Customs for refund or remission (as the case may be) of so much of the duty thereon as is in excess of 20 per cent. *ad valorem*; and if such Collector is satisfied as to the identity of the articles and that such importer is in other respects entitled to such refund or remission, he shall grant the same accordingly.			

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	ARMS, AMMUNITION AND MILITARY STORES—*contd.*			
53	GUNPOWDER for cannons, rifles, guns, pistols and sporting purposes.	....	*Ad valorem*	20 per cent.
54	Subject to the exemptions specified in No. 55 all ARTICLES, other than those specified in entry No. 52, which are ARMS OR PARTS OF ARMS within the meaning of the Indian Arms Act, (excluding springs used for air-guns which are dutiable as hardware, under No. 68), all tools used for cleaning or putting together the same, all machines for making, loading, closing or capping cartridges for arms other than rifled arms and all other sorts of ammunition and military stores, and any articles which the Governor General in Council may by notification in the *Gazette of India* declare to be "ammunition" or "military stores" for the purposes of this Act.	....	"	20 " "
55	The following classes of ARMS, AMMUNITION AND MILITARY STORES:—	....	....	Free.
	(*a*) Articles falling under the 5th, 6th, 8th, 9th or 10th item of No. 52 when they appertain to a firearm falling under the 1st or 3rd item and are fitted into the same case with such firearm;			
	(*b*) Arms forming part of the regular equipment of an officer entitled to wear diplomatic, military, naval or police uniform;			
	(*c*) A sword, a revolver, or a pair of pistols, when accompanying an officer of his Majesty's regular forces, or a commissioned officer of a volunteer corps, or certified by the commandant of the corps to which such officer belongs, or, in the case of an officer not attached to any corps, by the officer commanding the station or district in which such officer is serving, to be imported by the officer for the purpose of his equipment;			
	(*d*) Swords and revolvers which are certified by an Inspector-General of Police to be part of the ordinary equipment of members of the Police force under his charge;			
	(*e*) Swords forming part of the equipment of Indian commissioned officers of His Majesty's army;			

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	ARMS, AMMUNITION AND MILITARY STORES—*contd.*		Rs. a.	Rs. a. p.
55	ARMS, AMMUNITION AND MILITARY STORES—*contd.*			
	(*f*) Swords for presentation as army or volunteer prizes;			
	(*g*) Arms, ammunition and military stores imported with the sanction of the Government of India for the use of any portion of the military forces of a Native State in India which may be maintained and organized for Imperial Service;			
	(*h*) Morris tubes and patent ammunition imported by officers commanding British and Indian regiments or volunteer corps for the instruction of their men.			
56	EXPLOSIVES, namely, blasting gunpowder, blasting gelatine, blasting dynamite, blasting roburite, blasting tonite, and all other sorts, including detonators and blasting fuse.	....	*Ad valorem*	7½ per cent.
	CARRIAGES AND CARTS.			
57	CARRIAGES AND CARTS including motor-cars, motor-cycles and motor-wagons, bicycles, tricycles, jinrikshas, bath chairs, perambulators, trucks, wheel-barrows, and all other sorts of conveyances and component parts thereof.	....	,,	7½ ,, ,,
	CHEMICALS, DRUGS AND MEDICINES.			
58	ANTI-PLAGUE SERUM	....	....	Free.
59	COPPERAS, green	....	*Ad valorem*	2½ per cent.
60	OPIUM and its alkaloids	Seer of 8 tolas.	....	24 0 0
61	QUININE and other alkaloids of cinchona ..	....	....	Free.
62	CHEMICALS, DRUGS AND MEDICINES, all sorts, not otherwise specified—			
	Acid, sulphuric	....	*Ad valorem*	7½ per cent.
	Alkali, Indian (saji-khar)	cwt.	6 8	7½ ,, ,,
	Alum	,,	13 0	7½ ,, ,,
	Arsenic (China mansil)	,,	22 0	7½ ,, ,,
	,, other sorts	....	*Ad valorem*	7½ ,, ,,
	Sal ammoniac	....		7½ ,, ,,
	Soda ash	cwt.	6 0	7½ ,, ,,
	Soda Bicarbonate	,,	7 8	7½ ,, ,,
	Sulphate of Copper	,,	42 0	7½ ,, ,,
	Sulphur (brimstone), flowers	,,	11 0	7½ ,, ,,
	,, ,, roll	,,	11 0	7½ ,, ,,
	,, ,, rough	....	*Ad valorem*	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	CHEMICALS, DRUGS AND MEDICINES —*contd.*			
62	CHEMICALS, DRUGS AND MEDICINES, all sorts, not otherwise specified—*contd.*		Rs. a.	
	All other sorts of chemical products and preparations not otherwise specified ..	....	*Ad valorem*	7½ per cent.
	Aloes, black	....	,,	7½ ,, ,,
	,, Socotra	....	,,	7½ ,, ,,
	Aloe-wood	....	,,	7½ ,, ,,
	Asafœtida (hing)	cwt.	125 0	7½ ,, ,,
	,, coarse (hingra)	,,	37 0	7½ ,, ,,
	Atàry, Persian	....	*Ad valorem*	7½ ,, ,,
	Bunslochan (bamboo camphor)	lb.	0 9	7½ ,, ,,
	Brimstone (amalsara)	....	*Ad valorem*	7½ ,, ,,
	Calumba root	cwt.	12 0	7½ ,, ,,
	Camphor, refined, other than powder ..	lb.	2 0	7½ ,, ,,
	,, in powder	....	*Ad valorem*	7½ ,, ,,
	Cassia lignea	cwt.	26 0	7½ ,, ,,
	China root (chobchini), rough	,,	12 0	7½ ,, ,,
	,, ,, ,, scraped	,,	25 0	7½ ,, ,,
	Cocaine	....	*Ad valorem*	7½ ,, ,,
	Cubebs	cwt.	100 0	7½ ,, ,,
	Galangal, China	,,	16 0	7½ ,, ,,
	Pellitory (akalkara)	....	*Ad valorem*	7½ ,, ,,
	Peppermint, crystals	....	,,	7½ ,, ,,
	Salep	cwt.	250 0	7½ ,, ,,
	Senna leaves	....	*Ad valorem*	7½ ,, ,,
	Storax, liquid (rose mellos or salarna) ..	cwt.	124 0	7½ ,, ,,
	All other sorts of drugs, medicines, and narcotics.	....	*Ad valorem*	7½ ,, ,,
	CUTLERY, HARDWARE, IMPLEMENTS AND INSTRUMENTS.			
63	The following AGRICULTURAL IMPLEMENTS, when constructed so that they can be worked by manual or animal power, namely, winnowers, threshers, mowing and reaping machines, elevators, seed-crushers, chaff-cutters, root-cutters, horse and bullock gears, ploughs, cultivators' scarifiers, harrows, clod-crushers, seed-drill, hay tedders, and rakes.		....	
64	CLOCKS AND WATCHES, and parts thereof.. ..	....	*Ad valorem*	7½ per cent.
65	CUTLERY	....	,,	7½ ,, ,,
66	The following DAIRY APPLIANCES, when constructed, so that they can be worked by manual or animal power, namely, cream separators, milk sterilizing or pasteurizing plant, milk aerating and cooling apparatus, churns, butter dryers, and butter workers.	....	....	Free.
67	ELECTROPLATED WARE	....	*Ad valorem*	7½ per cent.
68	HARDWARE, IRONMONGERY AND TOOLS, all sorts not otherwise specified.	....	,,	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*		Rs. a.	
	CUTLERY, HARDWARE, IMPLEMENTS AND INSTRUMENTS—*contd.*			
69	INSTRUMENTS, APPARATUS, AND APPLIANCES, imported by a passenger as part of his personal baggage and in actual use by him in the exercise of his profession or calling.	....	....	Free.
70	TELEGRAPHIC INSTRUMENTS AND APPARATUS, and parts thereof, imported by or under the orders of a railway company.	....	*Ad valorem*	2½ per cent.
71	WATER-LIFTS, SUGAR-MILLS, OIL-PRESSES, and parts thereof, when constructed so that they can be worked by manual or animal power.	....	....	Free.
72	All other sorts of IMPLEMENTS, INSTRUMENTS, APPARATUS AND APPLIANCES, and parts thereof, not otherwise specified.	....	*Ad valorem*	7½ per cent.
	DYES AND COLOURS.			
73	DYEING AND TANNING SUBSTANCES, all sorts, and PAINTS AND COLOURS and painters' materials, all sorts—			
	Alizarine dye, dry, 40 per cent.	lb.	26 0	7½ per cent.
	,, ,, ,, 50 ,, ...	,,	30 0	7½ ,, ,,
	,, ,, ,, 60 ,, ...	,,	35 0	7½ ,, ,,
	,, ,, ,, 70 ,, ...	,,	39 0	7½ ,, ,,
	,, ,, ,, 80 ,, ...	,,	42 0	7½ ,, ,,
	,, ,, ,,100 ,, ...	,,	45 0	7½ ,, ,,
	,, ,, moist, 10 ,, ...	,,	4 0	7½ ,, ,,
	,, ,, ,, 16 ,, ...	,,	8 0	7½ ,, ,,
	,, ,, ,, 20 ,, ...	,,	10 0	7½ ,, ,,
	Aniline ,, ...	,,	3 8	7½ ,, ,,
	,, dry	,,	5 8	7½ ,, ,,
	,, salts	....	*Ad valorem*	7½ ,, ,,
	Avar bark	cwt.	5 0	7½ ,, ,,
	Buzgand (gulpista)	....	*Ad valorem*	7½ ,, ,,
	Cochineal	lb.	1 12	7½ ,, ,,
	Gallnuts (myrabolams)	....	*Ad valorem*	7½ ,, ,,
	,, Persian	cwt.	100 0	7½ ,, ,,
	Madder or manjit	....	*Ad valorem*	7½ ,, ,,
	Orchilla weed	....	,,	7½ ,, ,,
	Sappan wood and root	....	,,	7½ ,, ,,
	Turmeric	....	,,	7½ ,, ,,
	All other sorts of dyeing and tanning materials	....	,,	7½ ,, ,,
	Lead, red, dry	cwt.	45 0	7½ ,, ,,
	,, white, dry	,,	45 0	7½ ,, ,,
	Ochre, other than European, all colours	,,	1 8	7½ ,, ,,
	Paints, composition	....	*Ad valorem*	7½ ,, ,,
	,, patent driers	....	,,	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	DYES AND COLOURS—*contd.*			
73	DYEING AND TANNING SUBSTANCES, all sorts and PAINTS AND COLOURS and painter's materials, all sorts—*contd.*		Rs. a.	
	Turpentine	Imperial gallon.	4 8	7½ per cent.
	Verdigris	....	*Ad valorem*	7½ ,, ,,
	Vermillion, Canton	box of 90 bundles.	345 0	7½ ,, ,,
	Zinc, white, dry	....	*Ad valorem*	7½ ,, ,,
	All other sorts of paints, colours and painters' materials not otherwise specified, including glue and putty.	....	,,	7½ ,, ,,
	FURNITURE, CABINETWARE AND MANUFACTURES OF WOOD.			
74	FURNITURE, CABINETWARE, and all manufactures of wood not otherwise specified.	....	,,	7½ ,, ,,
	GLASSWARE AND EARTHENWARE.			
75	GLASS AND GLASSWARE, all sorts, Chinese and Japaneseware, lacquered ware, earthenware, China and porcelain.	....	,,	7½ ,, ,,
	HIDES, SKINS AND LEATHER.			
76	HIDES AND SKINS not otherwise specified, LEATHER AND LEATHER MANUFACTURES, all sorts, not otherwise specified.	....	,,	7½ ,, ,,
	MACHINERY.			
77	MACHINERY, namely, prime-movers and component parts thereof, including boilers and component parts thereof; also including locomotive and portable engines, steam-rollers, fire-engines and other machines in which the prime-mover is not separable from the operative parts. MACHINERY (and component parts thereof), meaning machines or sets of machines to be worked by electric, steam, water, fire or other power not being manual or animal labour or which, before being brought into use, require to be fixed with reference to other moving parts; and including belting of all materials for driving machinery. Provided that the term does not include tools and implements to be worked by manual or animal labour and provided also that only such articles shall be admitted as component parts of machinery as are indispensable for the working of the machinery and are, owing to their shape or to other special quality, not adapted for any other purpose. *Note.*—This entry includes machinery and component parts thereof made of substances other than metal, but excludes the articles exempted under Nos. 78, 79 and 80.	....	,,	2½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*		Rs. a.	
	MACHINERY—*contd.*			
78	MACHINERY AND COMPONENT parts thereof as defined in No. 77 imported by the owner of a cotton spinning or weaving mill and proved to the satisfaction of the Collector of Customs to be intended for use in a cotton spinning or weaving mill.	....	....	Free.
79	The following ARTICLES USED IN THE MANUFACTURE OF COTTON, namely, bobbins (warping) forks for looms, healds, heald cords, heald knitting needles, laces, lags and needles for dobbies, pickers (buffalo and others), picking bands, picking levers, picking sticks (over and under), reed pliers, reeds, shuttles (for power looms), springs for looms, strappings, and weft forks.	....	....	Free.
80	DRAWING-IN-FRAMES imported by the owner of a cotton weaving mill and proved to the satisfaction of the Collector of Customs to be intended for use in the weaving of cotton.	....	....	Free.
81	MACHINERY and component parts thereof, meaning machines or parts of machines to be worked by manual or animal labour.	....	*Ad valorem*	7½ per cent.
	METALS, IRON AND STEEL.			
82	IRON—			
	ANGLE—			
	Angle, T Best Yorkshire or Swedish and similar qualities.	ton	800 0	2½ ,, ,,
	,, other than Best Yorkshire or Swedish and similar qualities.	,,	400 0	2½ ,, ,,
	,, other than Best Yorkshire or Swedish and similar qualities, if galvanized, tinned, or lead coated.	....	*Ad valorem*	2½ ,, ,,
	All other sorts	....	,,	2½ ,, ,,
	BAR, ROD AND CHANNEL, INCLUDING CHANNEL FOR CARRIAGES—			
	Bar, Best Yorkshire and similar qualities..	ton	800 0	2½ ,, ,,
	,, Swedish and similar qualities	,,	500 0	2½ ,, ,,
	,, ,, ,, ,, nail-rod, round-rod, and square under ½ inch in diameter.	,,	500 0	2½ ,, ,,
	,, Swedish and charcoal, if galvanized, tinned, or lead coated.	....	*Ad valorem*	2½ ,, ,,
	,, other kinds	ton	400 0	2½ ,, ,,
	,, ,, ,, nail-rod, round-rod and square under half inch in diameter.	,,	450 0	2½ ,, ,,
	,, ,, ,, if galvanized, tinned, or lead coated.	....	*Ad valorem*	2½ ,, ,,
	Channel, including channel for carriages ..	....	500 0	2½ ,, ,,
	All other sorts	....	*Ad valorem*	2½ ,, ,,
	PIG	....	,,	2½ ,, ,,
	RICE BOWLS	....	,,	2½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	METALS, IRON AND STEEL—*contd.*		Rs. a.	
83	IRON OR STEEL—			
	ANCHORS AND CABLES	..	*Ad valorem*	2½ per cent.
	BEAMS, JOISTS, pillars, girders, screw-piles, bridge work and other such descriptions of iron or steel imported exclusively for building purposes; including also ridging, guttering and continuous roofing.	..	,,	2½ ,, ,,
	BOLTS and nuts, including hook bolts and nuts for roofing.	....	,,	2½ ,, ,,
	HOOPS AND STRIPS—			
	Hoops, Best Yorkshire or Swedish and similar qualities.	ton	900 0	2½ ,, ,,
	,, other than Best Yorkshire or Swedish, if galvanised, tinned, or lead coated.	....	*Ad valorem*	2½ ,, ,,
	,, other kinds	ton	550 0	2½ ,, ,,
	Strips, Best Yorkshire or Swedish and similar qualities.	,,	900 0	2½ ,, ,,
	,, if galvanised, tinned, lead coated, aluminium coated, chequered or planished.	....	*Ad valorem*	2½ ,, ,,
	,, other kinds	ton	500 0	2½ ,, ,,
	NAILS, RIVETS AND WASHERS, ALL SORTS—			
	Iron nails, rose, wire and flat-headed.. ..	cwt.	25 0	2½ ,, ,,
	,, ,, other kinds, including galvanised, tinned, or lead coated.	....	*Ad valorem*	2½ ,, ,,
	Rivets and Washers, iron or steel	....	,,	2½ ,, ,,
	PIPES AND TUBES, and fittings therefor, such as bends, boots, elbows, tees, sockets, flanges and the like.	....	,,	2½ ,, ,,
	RAILS, CHAIRS, sleepers, bearing and fish plates, spikes (commonly known as dog spikes), switches, and crossings, other than those described in No. 94, also lever boxes, clips, and tie-bars.	....	,,	2½ ,, ,,
	SHEETS AND PLATES, all sorts excluding discs and circles which are dutiable under No. 85.			
	Sheets and plates, Best Yorkshire and similar qualities.	ton	1200 0	2½ ,, ,,
	,, ,, Swedish and charcoal ..	,,	1000 0	2½ ,, ,,
	,, ,, Swedish and charcoal if galvanized, tinned, or lead coated.	....	*Ad valorem*	2½ ,, ,,
	Plates, other kinds, above ¼ inch thick ..	ton	700 0	2½ ,, ,,
	Sheets, ,, ,, up to ¼ ,, ,, ..	,,	700 0	2½ ,, ,,
	Sheets (other than corrugated), and plates, other kinds, if galvanised, tinned, lead coated, aluminium coated, chequered or planished.	....	*Ad valorem*	2½ ,, ,,
	Sheets, corrugated, galvanised or black ..	ton	550 0	2½ ,, ,,
	WIRE, including fencing wire and wire rope, but excluding wire netting (which is dutiable under No. 85).	....	*Ad valorem*	2½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	METALS IRON AND STEEL—*contd.*			
84	STEEL—			
	ANGLE—		Rs. a.	
	Angle, T	ton	400 0	2½ per cent.
	,, ,, if galvanised, tinned, or lead coated .	....	*Ad valorem*	2½ ,, ,,
	,, ,, all other sorts	....	,,	2½ ,, ,,
	BAR, ROD, AND CHANNEL, including channel for carriages—			
	Bar (other than cast steel)	ton	400 0	2½ ,, ,,
	,, Swedish and similar qualities	....	500 0	2½ ,, ,,
	,, nail-rod, round-rod, and square, other than Swedish or similar qualities, under ½ inch in diameter.	ton	450 0	2½ ,, ,,
	,, galvanized, tinned, lead coated, planished or polished.	....	*Ad valorem*	2½ ,, ,,
	,, all other sorts	....	,,	2½ ,, ,,
	Channel including channel for carriages ..	ton	500 0	2½ ,, ,,
	CAST including spring, blistered and tub steel .	....	*Ad valorem*	2½ ,, ,,
	INGOTS, BLOOMS, BILLETS AND SLABS	....	,,	2½ ,, ,,
85	All sorts of IRON AND STEEL and manufactures thereof, not otherwise specified—			
	Iron or steel cans or drums, when imported containing petroleum, which is separately assessed to duty under No. 33, namely:—			
	Iron or steel cans, tinned, other than petrol tins of two gallons capacity.	can	0 3½	7½ ,, ,,
	Iron or steel cans or drums, not tinned, of two gallons capacity.	,,	0 2	7½ ,, ,,
	Iron or steel drums of four gallons capacity—			
	(*a*) with faucet caps	drum	1 0	7½ ,, ,,
	(*b*) ordinary	,,	0 8	7½ ,, ,,
	Iron or steel, all other sorts, including discs or circles and wire-netting.	....	*Ad valorem*	7½ ,, ,,
	METALS, OTHER THAN IRON AND STEEL.			
86	CURRENT SILVER, NICKEL, BRONZE, AND COPPER COIN of the Government of India.	....	....	Free.
87	GOLD BULLION AND COIN	....	....	Free.
88	LEAD, sheets, for tea-chests..	....	*Ad valorem*	2½ per cent.
89	SILVER, BULLION OR COIN, not otherwise specified (*See* Nos. 86 and 136).	ounce	....	Rs. a. p. 0 4 0

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	METALS, OTHER THAN IRON AND STEEL—*contd.*		Rs. a.	
90	SILVER PLATE, SILVER THREAD and wire and SILVER MANUFACTURES, all sorts.	....	*Ad valorem*	10 per cent.
91	ALL SORTS OF METALS OTHER THAN IRON AND STEEL, and manufactures thereof, not otherwise specified—			
	Brass, orsidue and leaves, European	....	,,	7½ ,, ,,
	,, ,, ,, China	....	,,	7½ ,, ,,
	,, patent or yellow metal sheets and sheathing, weighing, 1 lb. or above per square foot, and braziers and plates.	cwt.	108 0	7½ ,, ,,
	,, patent or yellow metal (old)	,,	55 0	7 ,, ,,
	,, sheets, flat or in rolls, and sheathing, weighing less than 1 lb. per square foot.	....	*Ad valorem*	7½ ,, ,,
	,, wire	....	,,	7½ ,, ,,
	,, all other sorts	....	,,	7½ ,, ,,
	Copper, bolt and bar, rolled	....	,,	7½ ,, ,,
	,, braziers, sheets, plates and sheathing..	cwt.	110 0	7½ ,, ,,
	,, nails and composition nails	....	*Ad valorem*	7½ ,, ,,
	,, old	cwt.	65 0	7½ ,, ,,
	,, pigs, tiles, ingots, cakes, bricks and slabs.	,,	95 0	7½ ,, ,,
	,, China, white, copperware	lb.	2 4	7½ ,, ,,
	,, foil or dankpana, white, 10 or 11 in. × 4 to 5 in.	hundred leaves	7 0	7½ ,, ,,
	,, foil or dankpana, coloured, 10 to 11 in. × 4 to 5 in.	,,	7 8	7½ ,, ,,
	,, wire, including phosphor-bronze ..	....	*Ad valorem*	7½ ,, ,,
	,, all other sorts, unmanufactured and manufactured, except current coin of the Government of India which is free.	....	,,	7½ ,, ,,
	German silver	....	,,	7½ ,, ,,
	Gold leaf	....	,,	7½ ,, ,,
	Lametta	....	,,	7½ ,, ,,
	Lead, all sorts (except sheets for tea chests) ..	....	,,	7½ ,, ,,
	Quicksilver	lb.	4 8	7½ ,, ,,
	Shot bird	cwt.	40 0	7½ ,, ,,
	Tin, block	,,	155 0	7½ ,, ,,
	,, oil, and other sorts	....	*Ad valorem*	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names and Articles	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	METALS, OTHER THAN IRON AND STEEL—*contd.*			
91	ALL SORTS OF METALS OTHER THAN IRON AND STEEL, and manufactures thereof, not otherwise specified—*contd.*		Rs. a.	
	Zinc or spelter, nails	....	*Ad valorem.*	7½ per cent.
	,, ,, tiles or slabs	cwt.	50 0	7½ ,, ,,
	,, ,, all other sorts including boiler tiles.	....	*Ad valorem*	7½ ,, ,,
	All other sorts of metals, and manufactures thereof.		,,	7½ ,, ,,
	PAPER, PASTEBOARD AND STATIONERY.			
92	TRADE CATALOGUES AND ADVERTISING CIRCULARS IMPORTED BY PACKET, BOOK OR PARCEL POST.	....	....	Free.
93	PAPER AND ARTICLES MADE OF PAPER AND PAPIER MACHE, PASTEBOARD, MILLBOARD, AND CARD-BOARD all sorts, and STATIONERY including ruled or printed forms and account and manuscript books, labels, advertising circulars, sheet or card almanacs and calendars, Christmas, Easter and other cards, including cards in booklet form; including also wastepaper and old newspapers for packing; but excluding trade catalogues and advertising circulars imported by packet, book, or parcel post.	....	*Ad valorem*	7½ per cent.
	RAILWAY PLANT AND ROLLING STOCK.			
94	RAILWAY MATERIAL for permanent-way and rolling stock, namely, cylinders, girders, and other material for bridges, rails, sleepers, bearing and fish-plates, fish-bolts, chairs, spikes, crossings, sleeper fastenings, switches, interlocking apparatus, brake gear, couplings and springs, signals, turn-tables, weigh-bridges, engines, tenders, carriages, wagons, traversers, trollies, trucks and component parts thereof; also the following articles when imported by or under the orders of a railway company, namely, cranes, water cranes, water tanks and standards, wire and other materials for fencing.	....	,,	2½ ,, ,,
	Provided that for the purpose of this entry "railway" means a line of railway subject to the provisions of the Indian Railways Act, 1890, and includes a railway constructed in a Native State under the suzerainty of His Majesty and also such tramways as the Governor-General in Council may, by notification in the *Gazette of India*, specifically include therein.			

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	RAILWAY PLANT AND ROLLING STOCK —*contd.*			
94	RAILWAY MATERIAL for permanent-way, etc. —*contd.*			
	Provided also that only such articles shall be admitted as component parts of railway material as are indispensable for the working of railways and are, owing to their shape or to other special quality, not adapted for any other purpose.			
	YARNS AND TEXTILE FABRICS.			
95	COTTON TWIST AND YARN, and COTTON SEWING OR DARNING THREAD.	....	....	Free.
96	COTTON PIECE GOODS, thread other than sewing or darning thread, and all other manufactured cotton goods not otherwise specified.	....	*Ad valorem*	7½ per cent.
97	SECOND-HAND OR USED GUNNY BAGS made of jute	....	....	Free.
98	YARNS AND TEXTILE FABRICS, that is to say —			
	Flax twist and yarn and manufactures of flax	....	*Ad valorem*	7½ per cent.
	Haberdashery and millinery	....	,,	7½ ,, ,,
	Hemp manufactures	....	,,	7½ ,, ,,
	Hosiery, excluding cotton hosiery (*see* No. 95)..	....	,,	7½ ,, ,,
	Jute twist and yarn and jute manufactures, excluding second-hand or used gunny bags (*see* No. 97).	....	,,	7½ ,, ,,
	Silk yarn, noils, and warps, silk thread, silk piece-goods and other manufactures of silk.	....	,,	7½ ,, ,,
	Woollen yarn, knitting wool and other manufactures of wool including felt.	....	,,	7½ ,, ,,
	All other sorts of yarns and textile fabrics, not otherwise specified.	....	,,	7½ ,, ,,
	MISCELLANEOUS.			
99	ART, the following works of :—(1) statuary and pictures intended to be put up for the public benefit in a public place, and (2) memorials of a public character intended to be put up in a public place, including the materials used, or to be used in their construction, whether worked or not.	....	....	Free.
100	ART, works of, excluding those specified in No. 99.	....	*Ad valorem*	7½ per cent.
101	BOOKS, printed, including covers for printed books, maps, charts, and plans, proofs, music and manuscripts.	....	....	Free.
102	BRUSHES AND BROOMS	....	*Ad valorem*	7½ per cent.
103	BUILDING AND ENGINEERING MATERIALS, including asphalt, bricks, cement, chalk and lime, clay, pipes of earthenware, tiles and all other sorts of building and engineering materials not otherwise specified.	....	,,	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	MISCELLANEOUS—*contd.*		Rs. a.	
104	CANDLES	....	*Ad valorem*	7½ per cent.
105	CORDAGE AND ROPE AND TWINE OF VEGETABLE FIBRE.	....	,,	7½ ,, ,,
106	FIREWORKS	....	,,	7½ ,, ,,
107	FURNITURE, TACKLE AND APPAREL, not otherwise described, for steam, railway, rowing and other vessels.	....	,,	7½ ,, ,,
108	Ivory, manufactured..	....	,,	7½ ,, ,,
109	JEWELLERY AND JEWELS, including gold plate and other manufactures of gold, but excluding silver plate and other manufactures of silver (*see* No. 90).	....	,,	7½ per cent.
110	MATCHES	....	,,	7½ ,, ,,
111	MATS AND MATTING	....	,,	7½ ,, ,,
112	OILCLOTH AND FLOOR CLOTH..	....	,,	7½ ,, ,,
113	PACKING—ENGINE AND BOILER—all sorts, excluding packing forming a component part of any article included in No. 77 and No. 94.	....	,,	7½ ,, ,,
114	PERFUMERY, excluding perfumed spirits (*see* No. 10)—			
	Gowla husked and unhusked	cwt.	150 0	7½ ,, ,,
	Kapurkachri (zedoary)	,,	20 0	7½ ,, ,,
	Patch leaves (patchouli)	,,	26 0	7½ ,, ,,
	Rose-flowers, dried	,,	19 0	7½ ,, ,,
	Rose-water	Imperial gallon.	3 0	7½ ,, ,,
115	PITCH, TAR AND DAMMER	....	*Ad valorem*	7½ ,, ,,
116	POLISHES AND COMPOSITIONS..	....	,,	7½ ,, ,,
117	PRINTING AND LITHOGRAPHING MATERIAL, namely, presses, type, ink, brass rules, composing sticks, chases, imposing tables, and lithographic stones, stereo-blocks, roller moulds, roller frames and stocks, roller composition, standing screw and hot presses, perforating machines, gold blocking presses, stereotyping apparatus, metal furniture, paper folding machines, and paging and numbering machines, but excluding paper (*see* No. 93).	....	,,	2½ ,, ,,
118	PRINTS, ENGRAVINGS AND PICTURES, including photographs and picture-cards.	....	,,	7½ ,, ,,
119	RACKS for the withering of tea leaf..	....	,,	2½ ,, ,,

Schedule II.—(Import Tariff)—*concluded.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	MISCELLANEOUS—*contd.*		Rs. a.	
120	RUBBER tyres for motors and motor cycles, and rubber tubes for tyres, and other manufactures of rubbers not otherwise specified.	....	*Ad valorem*	7½ per cent.
121	SHIPS AND OTHER VESSELS for inland and harbour navigation, including steamers, launches, boats and barges, imported entire or in sections.	....	,,	2½ ,, ,,
122	SMOKERS' REQUISITES, excluding tobacco (*see* Nos. 25 to 27).	....	,,	7½ ,, ,,
123	SOAP	....	,,	7½ ,, ,,
124	STARCH AND FARINA	....	,,	7½ ,, ,,
125	STONE AND MARBLE, and articles made of stone and marble.	....	,,	7½ ,, ,,
126	TEA-CHESTS of Metal or wood whether imported entire or in sections, provided that the Collector of Customs is satisfied that they are imported for the purpose of the packing of tea for transport in bulk.	....	,,	2½ ,, ,,
127	TOILET REQUISITES, not otherwise specified ..	....	,,	7½ ,, ,,
128	TOYS, playing cards and requisites for games and sports.	....	,,	7½ ,, ,,
129	UMBRELLAS, including parasols and sunshades, and fittings therefor.	....	,,	7½ ,, ,,
130	The following ARTICLES, when imported by the owner of a cotton weaving mill and proved to the satisfaction of the Collector of Customs to be INTENDED FOR USE IN THE WEAVING OF COTTON or the baling of woven cotton goods :—			
	Aniline blue, Bisulphate of soda, China clay, Chloride of magnesium, Chloride of zinc, Dressalin, Epsom salts, Farina, Farinina, Flannel taping, Glauber salts, Glutina, Glycerine substitutes, Heald varnish, Hoop iron, Hoop steel, Rivets for bales, Sewing needles, Sizing paste, Sizing wax, Soda ash, Starch, Velvet pulp.	....	....	Free.
131	ALL OTHER ARTICLES wholly or mainly manufactured, not otherwise specified.	....	*Ad valorem*	7½ per cent.
	IV.—Miscellaneous and unclassified.			
132	ANIMALS, living, all sorts	....	....	Free.
133	CORAL	....	*Ad valorem*	7½ per cent.
134	FODDER, bran and pollards	....	,,	7½ ,, ,,
135	SPECIMENS illustrative of natural science, including also antique coins and medals.	....	....	Free.
136	ALL OTHER ARTICLES NOT OTHERWISE SPECIFIED, including articles imported by post.	....	*Ad valorem*	7½ per cent.

Schedule III.—(Export Tariff).

No.	Names of Articles.	Per	Rate of duty.
	Jute other than Bimlipatam Jute.		Rs. a. p.
1	RAW JUTE—		
	(1) Cuttings	Bale of 400 lbs.	1 4 0
	(2) All other descriptions	,, ,, ,, ...	4 8 0
2	JUTE MANUFACTURES when not in actual use as coverings, receptacles or bindings for other goods.		
	(1) Sacking (cloth, bags, twist, yarn, rope and twine).	Ton of 2,240 lbs.	20 0 0
	(2) Hessians and all other descriptions of jute manufactures not otherwise specified.	,, ,, ,, ...	32 0 0
	RICE.		
3	RICE, husked or unhusked, including rice flour, but excluding rice bran and rice dust, which are free.	Indian maund of 82⅔ lbs. avoirdupois weight.	0 3 0
	TEA.		
4	TEA	100 lbs.	1 8 0

TIDAL CONSTANTS.

The approximate standard time of High Water may be found by adding to, or subtracting from, the time of High Water at London Bridge, given in the calendar, the corrections given as below :—

		H.	M.			H.	M.
Gibraltar	*sub.*	0	32	Rangoon River Entrance ..	*add*	1	35
Malta	*add*	1	34	Penang	*sub.*	1	39
Karachi	*sub.*	2	33	Singapore	,,	3	25
Bombay	,,	1	44	Hongkong	,,	4	27
Goa	,,	2	44	Shanghai	,,	0	34
Point de Galle	*add*	0	12	Yokohama	*add*	3	6
Madras	*sub.*	5	6	Valparaiso	*sub.*	4	40
Calcutta	*sub.*	0	19	Buenos Ayres	*add*	4	9
Rangoon Town	*add*	2	41	Monte Video	,,	0	32

India and the War.

THE DELHI WAR CONFERENCE.

In the early part of the year, as explained in the introduction, the military situation underwent a change fraught with infinite dangers to India. The Power of Russia collapsed; more than that, the Bolshevik Government delivered themselves into the hands of Germany. That Power immediately utilised this unexpected opportunity to take steps to transfer the theatre of hostilities to the frontiers of India, in the hope that the embarrassments which this extension of the war would cause the British Empire would reduce the menacing aspect of the British armies assembled on the Western Front. A large part of southern Russia was overrun and occupied by German troops; German and Turkish divisions were moved across the Black Sea to Batum and into the Caucasus; Turkish troops invaded the province of Azerbajian in Persia: and preparations were made to cross the Caspian Sea and by carrying the war into Northern Persia and Central Asia, make it impossible for Persia, Afghanistan, and the tribes on the North-west frontier of India to remain neutral. These dangers were crystallised in a telegram which the Prime Minister addressed to the Viceroy of India on April 2nd, and which was couched in the following terms:—

"At this time, when the intention of the rulers of Germany to establish a tyranny, not only over all Europe, but over Asia as well, has become transparently clear, I wish to ask the Government and people of India to re-double their efforts. Thanks to the heroic efforts of the British armies, assisted by their Allies, the attempt of the enemy in the West is being checked, but if we are to prevent the menace spreading to the East and gradually engulfing the world, every lover of freedom and law must play his part. I have no doubt that India will add to the laurels it has already won, and will equip itself on an even greater scale than at present to be the bulwark which will save Asia from the tide of oppression and disorder which it is the object of the enemy to achieve."

The Viceroy, speaking not only for the Government, but also for the people of India, replied on April 5th in the following language:—

"Your message comes at a time when all India is stirred to the depths by the noble sacrifices now being made by the British people in the cause of the world's freedom and by the stern unalterable resolution which those sacrifices evince. India, anxious yet confident, realizes to the full the great issues at stake in this desperate conflict, and your trumpet call at this crisis will not fall upon deaf ears. I feel confident that it will awaken the Princes and the peoples' leaders to a keener sense of the grave danger which, stemmed in Europe, now threatens to move eastwards. I shall look to them for the fullest effort and the fullest sacrifice to safeguard the soil of their motherland against all attempts of a cruel and unscrupulous enemy and to secure the final triumph of those ideals of justice and honour for which the British Empire stands."

Feeling in India.—These telegrams produced no little apprehension in the country. Whilst the broad aspects of the international situation were apparent to every student of foreign politics, the number of those outside the Government of India can be counted on the fingers of the hand; nor was it known then that the Bolshevik Government in Russia had accepted a large sum in gold on the understanding that they facilitated the extension of the war to Central Asia, and so to the Indian Borderland. There was a general demand for a fuller exposition of the nature of the menace and for the adoption of measures to meet it. For these purposes a War Conference was held at Delhi from April 27th to 29th. The purpose of this Conference was explained in a communique which was issued on April 18th. Herein it was set out that the Viceroy had asked certain Ruling Chiefs to attend, as well as all non-official members of the Imperial Legislative Council, and had invited the Provincial Governments to send delegates representative of all shades of opinion. The object of the Conference, it was explained, was to invite the co-operation of all classes, firstly, in sinking domestic dissensions and in bringing about a cessation of political propaganda during the present crisis; secondly, in securing the active co-operation of all classes in measures for the successful prosecution of the war, with special reference to man-power and the development of Indian resources; and thirdly in cheerfully bearing the sacrifices demanded to achieve victory.

The Menace.—The Viceroy opened the Conference in a speech, in which he explained "the terrible menace" of which the Prime Minister had spoken; he said:—

"The terrible revolution which has hurled Russia into anarchy has opened another door for Germany through Southern Russia to the confines of Eastern Persia and Afghanistan. At present famine, lawlessness and chaos reign along the path which German forces would have to traverse to approach us by that route and as yet, preoccupied with the stupendous struggle in the West, Germany has made no military move whatsoever in this direction. But the door is open and we must be on our guard. In this war as in no war before we have to look ahead and prepare for every possible contingency. Germany has not and could not yet have made any military move in the direction I speak of, but she has already, as is her wont, thrown out into Central Asia her pioneers of intrigue, her agents of disintegration. The lesson she has learnt from the Russian revolution is that a stronger weapon than all the armaments that money can buy or science devise

is the disruption of an enemy by his own internal forces. To this end Germany sapped and mined in Russia; to this end she will sap and mine through her agents in the Middle East and blow on the flame of anarchy in the hope that it may spread and spread till it has enveloped the lands of her enemies, regardless of all intervening havoc. When the ground has thus been prepared then she will look for her opportunity.

"But there is a bright side to the picture. In the north there is a bulwark against German intrigue and German machinations. I refer to our staunch friend and ally, His Majesty the Amir of Afghanistan. As you are aware at the outbreak of the war His Majesty gave his Royal word that, so long as the independence and integrity of his kingdom were not threatened he would maintain neutrality. He has kept his Royal word unswervingly. In spite of every attempt of our enemies to seduce him from his purpose and to embarrass his position, and I do not believe that in the history of this country the relations between any Amir of Afghanistan and any Viceroy of India have been more cordial or mutually confident than they are to-day. But in Afghanistan, as in India, there are many ignorant people, credulous people, fanatical people, such as at a time of world-excitement may be carried away by any wind of vain doctrine. Such persons may at any moment become a serious embarrassment to wise and level-headed statesmanship. One of our first thoughts therefore at this time must be how we can best assist the Amir of Afghanistan, who has in the interests of his country which he loves, and in accordance with the pledges which he has given, kept his ship on a straight course of neutrality between the reefs that have so often surrounded him. We can, I believe, best do so by showing our enemies, first, that India stands solid as rock and that the lambent flame of anarchical intrigue will find nothing inflammable in this country,—nay rather, will be smothered and extinguished forthwith, should it approach, by the dead-weight of our unity of purpose, second, that should ever our enemy have the hardihood to bring force in the direction of our borders, we are ready with munitions and men to fulfil our obligations to the Amir of Afghanistan by assisting him in repelling foreign aggression and further to guard our own with the whole man power and resources of India ready behind us.

"I make no boast—nor is this a time for boasting—but we are at the present moment very strong in India in the military sense. This war has brought great development in military equipment, and we are not behindhand in all the latest military inventions. We have seldom in recent years been so prepared as we are to-day: and those misguided people on our frontiers who during the past year relied on our being unprepared and weak in troops have found out their mistake to their cost. But this does not mean that we can fold our hands, and take our security for granted. We must take no risks, and whenever the call may come and whatever it may be, we must be ready to meet it."

Message from the King.—At the conclusion of his speech, the Viceroy read to the Conference the following message from His Majesty the King-Emperor:—

"I learn with deep satisfaction that in response to the invitation of my Viceroy, the Ruling Princes and Chiefs, representatives of the provincial Governments and leaders of all ranks and sections of the community, European and Indian, are meeting in Conference at Delhi to re-affirm the abiding loyalty of the Indian people and their resolute will to prosecute to their utmost ability and to the full limit of their resources, in association with other members of the Empire, the war which our enemies have wantonly provoked and which they are ruthlessly waging against the freedom of the world. Great as has been India's contribution to the common cause of the allies it is by no means the full measure of her resources and her strength. I rejoice to know that their development and the fuller utilisation of her man-power will be the first care of the Conference. The need of the Empire is India's opportunity and I am confident that under the sure guidance of my Viceroy her people will not fail in their endeavours. Recent events have made the struggle on the western front more bitter and more intense. At the same time the position in the East is menaced by disturbances in Asia instigated by the enemy. It is of ever increasing importance that the operations of our armies in Egypt, Palestine and Mesopotamia should be largely sustained from India. I look confidently to the deliberations of the Conference to promote a spirit of unity, a concentration of purpose and activity, and a cheerful acceptance of sacrifices without which no high object, no lasting victory, can be achieved."

Following the Viceroy's speech, the Conference appointed committees on Man-power and Resources, and adjourned whilst these two committees were considering in detail the points put before them. The following recommendations were made:—

Man-power.—(*i*) That this Committee recommend that the Conference tender to His Majesty the King-Emperor a suitable acknowledgment of his gracious message to which India will respond with enthusiastic alacrity.

(*ii*) That this Committee offer its cordial support to the Government of India in largely increasing voluntary recruitment during the present year.

The Sub-Committee are of opinion that India's effort should be a voluntary one, and that it is not necessary at present to consider the question of conscription.

(*iii*) That this Committee desire to impress on the Government the necessity for the grant of a substantial number of King's Commissions to Indians, and urge as a corollary to this that measures be taken for training the recipients of these commissions.

(*iv*) That this Committee recommend that the Government be invited to consider, without delay, the question of a substantial increase of the pay of Indian soldiers.

(*c*) That this Committee desire that the question of the constitution and development of (*a*) Publicity Bureau and (*b*) Employment Bureau in the various Provinces be commended to the favourable consideration of Government.

Resources.—The Committee on Resources submitted the following recommendations :—

Resolution I.—(*a*) "This Conference recommends that provincial and—where this is desirable—State committees, on the former of which non-official Indian opinion should be adequately represented, should be formed for the purpose of advising Government departments and of encouraging the people to confine their private requirements as nearly as possible to local products, in order to save unnecessary demands for railway transport, and for the further purpose of advising Directors of Civil Supplies as to the special necessities of any districts and as to the commodities for which they think that priority should be given on the railways."

(*b*) "This Conference recommends that for the purpose of minimising the serious hardships to the public and the dislocation of trade caused by the congestion of traffic on railways, it is necessary that the Government should with as little delay as possible take measures for the construction by itself of river craft for inland transport, of sailing ships for ocean transport and also as far as possible of steamships, and should by the grant of subsidies or concessions encourage the construction of the same by private agencies."

2. In the next place, and with the same end in view, the Sub-Committee are persuaded that considerable development is possible in the local production of war materials and other munitions, and that by organising a provincial machinery much could be done towards reducing the local consumption of material needed for war use. The existence of such provincial organisations would also, the Sub-Committee believe, be useful in preventing or alleviating local irregularities in, and inflation of, prices. For these reasons they commend to the Conference the adoption of the following Resolution :—

Resolution II.—"This Conference recommends that provincial, and—where this is desirable—State committees, the former consisting both of officials and non-officials, should be formed to advise the provincial Controllers of Munitions regarding the measures to be adopted for—

(*a*) stimulating the local production of war materials :

(*b*) reducing the local consumption of material wanted for war use ;

(*c*) preventing local irregularities in, and inflation of, prices."

3. For the purpose of giving effect to the foregoing Resolution the Sub-Committee think it necessary that the Munitions Board—upon which it is desirable that Indians should be appointed—should be in close communication with the proposed committees, and, to this end, they recommend that the following Resolution be passed :—

Resolution III.—"This conference recommends that the Munitions Board should place itself in communication with the provincial and State committees, where these are formed, for the purpose of organising district work in connection with the supply of materials for war use."

4. In connection with the development of India's resources in food-stuffs the Sub-Committee have reason to believe that useful results would accrue from the appointment in all provinces—and, where this is desirable, in States—of committees acting in co-operation with the local Directors of Agriculture, where these exist. The functions of such committees should be to educate the agriculturist in the direction of making the best possible use of his land for the production of different kinds of food-stuffs, and to obtain and disseminate information in the districts in regard to facilities for procuring fertilisers of all kinds for the development of agriculture. To this end the Sub-Committee suggest the adoption of the following Resolution —

Resolution IV.—"This Conference advises that provincial and—where this is desirable—State committees, the former consisting both of officials and non-officials, should be formed—with, if necessary, subordinate district committees—to advise in consultation with the local Directors of Agriculture, where these exist, in regard to the possibilities of developing the production of particular food-stuffs and to collate and propagate information likely to be of value to the agriculturist on the subject of manures, implements, etc., required for such development; also to recommend to the Government what steps might be taken to facilitate the cultivation of waste lands."

5. Lastly, the Committee recommend that the Munitions Board and the various advisory committees constituted for war work should, as far as this is consistent with the public interests, issue periodical communiques or reports giving information as to their activities, requirements, and results.

The Conference then re-assembled and after a number of patriotic speeches from men representing all shades of opinion had been made passed the following resolutions :—

"That this Conference authorises and requests His Excellency the Viceroy to convey to His Majesty the King Emperor an expression of India's dutiful and loyal response to His gracious message and an assurance of her determination to continue to do her duty to her utmost capacity in the great crisis through which the Empire is passing."

"That this Conference cordially endorses the recommendations submitted by the Sub-Committees and commends them to the early consideration of, and for adoption by, the Government of India and His Majesty's Government."

War Gifts.—The Viceroy, in closing the Conference, announced the following War contributions from the Ruling Princes present:—

His Highness the Gaekwar of Baroda	Rs. ..15 lakhs.
His Highness the Maharaja Sindhia of Gwalior ..	..15 lakhs a year so long as the war continues.

	Rs.
His Highness the Maharaja of Kashmir	5 lakhs.
His Highness the Maharaja of Jaipur	5 lakhs.
His Highness the Maharao of Kutch	1 lakh a year for the period of the war.
His Highness the Maharaja of Alwar	1 lakh.
His Highness the Maharaja Jam Sahib of Nawanagar ..	3 lakhs a year as long as the war lasts.

Post Conference Work.—It is not possible at this stage to summarise the work which followed the meeting of the Conference because the end of the war came so suddenly that none of the bodies constituted has yet presented their reports. The main activities were directed to the provision of men, munitions and money. The provision of men had already been taken in hand by the Central Recruiting Board, whose activities were redoubled. Strong organisations were established in every Province and many Native States and men came pouring in. The main recruiting centres were the Punjab and the United Provinces, which ran a neck and neck race; although the actual figures have not been published, it is understood that at the time of the declaration of the armistice over 450,000, of the half million men asked for had been enrolled. Recruiting was stopped on the 19th November, whereafter the pre-war practices were re-established. The provision of munitions had already been undertaken by the Munitions Board, whose activities both in the direction of manufacture and collection were rapidly expanded. The resources of India were developed with a rapidity never reached before; new industries were established, old industries were expanded, and the armies furnished from India were made largely independent of supplies from the over-burdened factories of England. Great activity was manifested in the raising of a great war loan, with the result that contrary to the general expectation, the product was even larger than in 1917. This is dealt with in a special section (qv. Second War Loan). Amongst the special Boards set up were the Central Publicity Board, which at once undertook an active propaganda, which was executed through the medium of provincial boards, and was successful; the Central Foodstuffs and Transport Board, designed to facilitate the equitable distribution of supplies; this was merged in the office of the Food Controller, when the extensive failure of the rains made the distribution of food supplies a matter of special importance; a Central Communications Board, whose work it was to co-ordinate the working of the railways; and a Central Employment and Labour Board, which aimed at furnishing Government with the necessary labour and afterwards assisted in the work of demobilisation.

Further War Contribution.—In September 1918 a further step was taken in the direction of the participation of India in the cost of the war, the non-official members of the Imperial Legislative Council accepted by a very large majority a proposal that India should take a larger share than she does at present in respect of the cost of the military forces raised or to be raised in the country. The Finance Member in placing this before the Council pointed out that prior to the war the normal recruitment of combatants for the Indian Army was only about 15,000 men a year. In the year ending May 1917, this had been raised to 121,000 and in the following year, that ending on the 31st May 1918, to over 300,000. The Government however did not think that this figure was sufficient and during the recruiting year which commenced on the 1st of June 1918 fixed the quota of combatant recruitments at half a million men to be raised by voluntary endeavour.

The effect of this decision was very largely to raise the normal strength of the army in India. The ordinary peace strength of the Indian portion of this army may be taken roughly at 160,000 men and in respect of these the normal cost falls upon India even though the men may be employed with expeditionary forces outside India.

India therefore decided, in the terms of this resolution, to take over as from the 1st of April 1918 the normal cost of 200,000 additional men, raising what may be called the normal cost army to 360,000 men; and from the 1st April 1919 to take over the normal cost of 100,000 men more.

These, with other war charges assumed by India, work out to a grand total of £45 million assuming that the war would continue until the 31st March 1920.

It is proposed that this additional expenditure shall be financed in the main from an excess profits tax, but the details will be decided by the Imperial Legislative Council in the ordinary Budget Session, namely, March 1919.

Other Contributions.—The contributions in money or in kind for War Purposes from Indian rulers and every class of the Indian people are large. Up to March 1918 nearly £1,000,000 had been given to the Imperial Indian Relief Fund: hospital ships, motor cars, ambulances, machine guns, and aeroplanes have been poured in: the Nizam of Hyderabad has maintained two regiments at the front throughout the war and his total gifts exceed in value £700,000; before the end of 1918 the Ruling Princes had given gifts in cash or in kind valued at £1,000,000: Provincial War Funds and Funds for comforts for the troops have been fully maintained by the charity and benevolence of all classes of Indians.

The total sum of all these gifts and contributions it is impossible to estimate accurately but they can hardly be of a value less than £5,000,000.

With the Delhi Conference of April 1918 a new stream of gifts and donations began from the Indian Princes and communities.

Some of the effects of the war period on Indian trade and finance are shown by the figures below: the amounts are in pounds sterling except when otherwise stated.

	Total Revenue.	Customs Revenue.	Railway Revenue.	Income-Tax Receipts.	Total Expenditure.	Total Military Expenditure.	Total Surplus or Deficit.
1912-13	86,985,300	7,197,243	17,371,789	....	83,623,410	20,953,100	+3,361,900
1913-14	84,262,000	7,558,220	17,625,634	....	83,675,000	21,265,765	+587,000
1914-15	80,156,009	6,347,291	15,799,149	2,036,733	85,115,090	21,809,603	—4,939,009
1915-16	84,413,537	5,873,886	17,977,103	2,090,109	85,471,258	23,503,000	—1,188,661
1916-17	96,834,900	8,659,182	20,981,600	3,772,967	91,017,000	26,566,757	+5,817,500
1917-18*	110,401,000	11,127,900	23,890,000	6,075,800	102,320,000	30,284,700	+8,081,000
1918-19†	108,347,000	10,714,400	22,900,000	6,333,200	106,151,000	30,532,700	+2,196,000

	Total Imports in lakhs of rupees.	Total Exports in lakhs of rupees.
1913-14	183,25	244,20
1914-15	137,93	177,48
1915-16	131,99	192,53
1916-17	149,62	233,15

* Revised Estimates. † Budget Estimates.

SECOND WAR LOAN.

The reasons which rendered imperative the raising of a second large Indian war loan are fully explained in dealing with the Budget, under the section Finance (qv.); they are briefly that it was desirable to raise in India the whole of the hundred millions sterling which India undertook to contribute to the cost of the war so as to make this internal debt, and not external debt; also that the Government of India has to incur such heavy expenditure in India on account of the war that it was necessary to furnish it with ample funds. The second Indian war loan was for an unlimited amount; it was announced that the whole proceeds would be handed over to the British Government as part of the contribution to the war. The loan was divided into two main parts :—

(I) (*a*) 5½ per cent. Income-tax Free War Bonds 1921,
(*b*) ,, ,, ,, ,, 1923,
(*c*) ,, ,, ,, ,, 1925,
(*d*) ,, ,, ,, ,, 1928, and

(II) Post Office 5-years Cash Certificates.

Yield of the Loan.—Expectations of the probable yield of the loan were pitched on a comparatively modest scale. It was thought that the loan of 1917 had exhausted in substantial degree the supply of loanable capital in India, and that it would be impossible to revive the propaganda fervour which brought such results in the previous year. These anticipations however were unduly conservative and the results surpassed those of 1917. In summarising the results the Officiating Controller of Currency, in a report on the Loan, wrote :—

"The main section of the 1918 loan has realised nearly 51½ crores, and the number of applications was no less than 103,282. The Post Office section of the 1917 loan realised 4½ crores, the number of applications being 82,000; and it is probable that even better results will be obtained through the Post Office section this year. The full significance of these figures will be appreciated by consideration of the fact that, previous to the war, the largest rupee loan raised in India in recent years was that of 1906, which amounted to 4½ crores, the number of tenderers being only 1,172; and it is perhaps not too much to hope that we have now in existence the germ of a large class of rentiers, the investment of whose savings in public loans should, in future years, be of almost incalculable value in furthering the development of the country."

The largest subscriptions came from Bengal, where the controllers of the jute industry invested large blocks of their war profits in the loan. The following table shows the distribution of the subscriptions throughout India :—

	Rs.
Bengal	19,81,27,800
BOMBAY—	
In India	13,88,08,200
In British Treasury Bills ..	52,09,300
PUNJAB—	
In India	3,74,45,700
In British Treasury Bills ..	2,50,000
United Provinces	3,76,78,700
Madras	3,37,06,900
Burma	1,71,98,600
Bihar and Orissa	77,13,600
Central Provinces	56,93,500
Assam	8,63,800
Minor Administrations	1,25,85,700
Hyderabad State	1,00,36,300
MYSORE STATE—	
In India	16,31,500
In British Treasury Bills ..	30,00,000
Baroda State	30,00,000
TOTAL ..	51,29,49,600

It is noteworthy that Madras had the largest number of investors, although as regards the total amount realised that Presidency stands only fifth in the above list, while Bengal, which heads the list, was only fifth as regards the number of investors.

The total of the subscriptions in the main section of the loan including subscriptions under the Government Scheme to facilitate investment by its officers is shown in the following table :—

—	5½ per cent. War Bonds, 1921.	5½ per cent. War Bonds, 1923.	5½ per cent. War Bonds, 1925.	5½ per cent. War Bonds, 1928.	TOTAL.
	Rs.	Rs.	Rs.	Rs.	Rs.
(*i*) Main Section	23,28,25,100	1,70,91,100	3,54,34,600	21,91,39,500	50,44,90,300
(*ii*) British Treasury Bills.	61,00,000	....	7,50,000	16,09,300	84,59,300
(*iii*) Government Scheme.	8,89,700	1,12,500	1,85,600	5,56,300	17,44,100
TOTAL ..	23,98,14,800	1,72,03,600	3,63,70,200	22,13,05,100	51,46,93,700

THE MILITARY EFFORT.

1. At the outbreak of the war the strength of the Army in India was—

British Officers	4,744
British other ranks	72,209
INDIAN RANKS—	
Serving	159,134
Reservists	34,767
NON-COMBATANTS—	
Indian	45,660

2. During the war the Government of India recruited 757,447 combatants and 404,042 non-combatants or a grand total of 1,161,489 men—all on a voluntary basis.

3. The numbers sent on active service from India since the outbreak of war were—

British Officers	23,040
British other ranks	196,494
Indian Officers	13,617
Indian other ranks ..	538,724
Indian non-combatants ..	391,033
Animals	174,836

4. These totals represent the numbers sent to France, East Africa, Mesopotamia, Egypt (including Gallipoli and Palestine) Salonika, Aden and the Persian Gulf.

——	British.	Indian.	Totals.
To France ..	18,934	131,496	
To East Africa.	5,403	46,936	
To Mesopotamia ..	167,551	588,717	
To Egypt ..	19,166	116,159	
To Galipoli ..	60	4,428	
To Salonika ..	66	4,938	
To Aden ..	7,386	20,243	
To Persian Gulf	968	29,457	
	219,534	953,374	=1,172,908
British ranks sent from India to England .	..	..	42,430
Grand total.	..	..	1,215,338

5. Besides assistance rendered in men and animals great assistance was rendered in the matter of **material supplies and stores**. The following figures are interesting:—

RAILWAY MATERIAL—	
Track	1,874 Miles.
Vehicles	5,999
Locomotives	237
Girders	13,073L.ft.
RIVERCRAFT—	
Steamers and barges ..	883
Anchor boats and dinghies .	500
Timber	10,000,000C.ft.

6. The total number of **casualties** among Indian troops were—

DEATHS FROM ALL CAUSES—	
Indian Officers	691
Other ranks	25,186
Non-combatants	10,819
WOUNDED—	
Indian Officers	1,463
Other ranks	57,045
Non-combatants	781
MISSING—	
Indian Officers	43
Other ranks	1,302
Non-combatants	174
PRISONERS—	
Indian Officers	218
Other ranks	7,147
Non-combatants	1,725

7. The following **decorations** were awarded to Indian soldiers during the first four years of war:—

Victoria Cross	10
Military Cross	48
Order of British India ..	248
Indian Order of Merit ..	796
Indian Distinguished Service Medal	2,049
Meritorious Service Medal..	919
French Decoration ..	58
Russian Decoration ..	137
Italian Decoration	25
Belgian Decoration ..	15
Serbian Decoration ..	151
Egyptian Decoration ..	3

Military Expenditure.

Statement showing the expenditure incurred by the Government of India on account of the war up to the 31st March 1918 :—

	£
(1) Increase in net military expenditure in the years 1914-15 to 1917-18 as compared with the pre-war scale of expenditure (*i.e.*) in 1913-14	16,500,000
(2) Increase in political expenditure, mainly in Persia, from 1914-15 to 1917-18	1,300,000
(3) Expenditure on account of the war incurred in the Civil Department in India from 1914-15 to 1917-18	250,000
(4) Interest, sinking fund and other charges during 1917-18 in connection with India's contribution of £ 100 million	6,000,000
(5) Expenditure incurred in England by the Secretary of State for India from 1914-15 to 1917-18, representing mainly the value of stores lost at sea and the cost of marine insurance	650,000
Total ..	24,700,000

Statement showing the cash contributions made by the general public towards the expenses of the war up to the 31st August 1918 :—

	£
By the rulers and peoples of the various Indian States	2,466,200
By private individuals and bodies in British India	58,300
Total ..	2,524,500

RED CROSS WORK.

The Joint War Committee of the Order of St. John of Jerusalem and the British Red Cross Society, Indian Branch, came into being on 2nd August 1916 and has been responsible for the provision of almost the whole of the supplies of comforts for the sick and wounded ever since. Up to the end of 1917 its own resources had to be supplemented by grants from the Home Committee but the generous response to the "OUR DAY" appeal made by all classes in India secured its financial position and for the past year it has not only been self-supporting but can regard the future without anxiety.

Their Excellencies the Viceroy, Lady Chelmsford and the Commander-in-Chief are the President, Lady President and Vice-President respectively of the Committee, the affairs of which are managed by a **General Committee** composed as follows :—

*The Hon'ble Sir Claude Hill, K.C.S.I., C.I.E., I.C.S. (Chairman).

Colonel Sir Lawless Hepper, Kt., R.E. (Vice-Chairman, Bombay).

The Hon'ble Mr. W. E. Crum, O.B.E. (Vice-Chairman, Calcutta).

*The Hon'ble Mr. W. M. Hailey, C.S.I., C.I.E. (Vice-Chairman, Delhi).

*Lady Bingley.

*Lady Reed.

*Miss Darbyshire.

*Lieut.-General T. J. O'Donnell, C.B. D.S.O.

The Hon'ble Sir William Vincent, Kt.

The Hon'ble Sir Robert Gillan, K.C.S.I.

*The Hon'ble Major-General W. R. Edwards, C.B., C.M.G., I.M.S.

The Hon'ble Sir John Wood, K.C.I.E., C.S.I., C.I.E.

The Hon'ble Sir Hamilton Grant, K.C.I.E., C.S.I.

*The Hon'ble Mr. H. Sharp, C.S.I., C.I.E.

J. L. Maffey, Esq., C.I.E., I.C.S.

*Lieut.-Colonel H. Austen Smith, C.I.E., I.M.S.

*H. R. Phelps, Esq.

*G. Rainy, Esq., C.I.E., I.C.S.

Lieut.-Col. P.S. M., Burlton, I.A.

The Revd. James Black, O.B.E., M.A.

*Lieut.-Col. H. Ross, O.B.E., I.M.S.

W. J. Litster, Esq., O.B.E. (Honorary Treasurer).

Major A. L. Davies.

E. J. Buck, Esq., C.B.E.

The Hon'ble Mr. Purshotamdas Thakurdas.

The Hon'ble Raja Sir Rampal Singh, K.C.I.E.

The Hon'ble Rai Bahadur Chaudri Lal Chand, O.B.E.

Major J. C. Coldstream, I.A. (General Secretary).

Those whose names are marked* form the Working Committee which is assisted by a Finance Sub-Committee and a Medical Sub-Committee.

In the beginning of 1918 a scheme of re-organization of Red Cross work throughout India and Burma was adopted as the result of which each Province became practically autonomous as regards its own Red Cross work. The wants of Military hospitals situated within the boundaries of a Province became its own special care and were met by a Provincial Committee which administered Provincial Funds and organized Work Parties and other supplies. Provinces also were most generous in sending supplies of clothing and other comforts to the Bombay Depot. The General Committee thus relieved of the supervision of local work was enabled to concentrate its energies on co-ordinating Red Cross work throughout India, to take the measures necessary to avoid over-lapping, to exercise general control over the operations of the Bombay Depot and to arrange for supplies required by Commissions overseas. The result of the re-organization proved most satisfactory.

Depot at Bombay.—This depot worked directly under the Joint War Committee. It was responsible for supplies to Commissions overseas, to the Marri Field Force, to Hospital Ships and Trains and its stores were available for the use of Provincial Committees on the rare occasions when they required anything they were unable to secure themselves. A vast quantity of articles were purchased locally. Some had to be obtained from England and in addition generous supplies of garments made by Work Parties were received not only from all parts of India and Burma but from Australia, New Zealand and the Far East. The total number of packages despatched during the months January-November 1918 was 16,577 valued at Rs. 22,01,326-13-0 and the total since August 2nd, 1916, was 43,656 valued at Rs. 64,05,833-6-0.

Provincial Work.—Space does not permit of giving more than the barest outline of the activities of the various Provincial Centres. During the Joint War Committee's Financial year ending 31st July 1918 articles of clothing and comforts of an approximate value of Rs. 11,68,296-1-6 were supplied to local British and Indian War, etc., hospitals, to the Red Cross Depot, Bombay, for Mesopotamia and in some cases direct to Mesopotamia and elsewhere; besides arranging motor and launch outings, and numberless Cinema and other entertainments for the patients both British and Indian.

Funds.—As has been mentioned above the main source of Income of the Joint War Committee has been the "OUR DAY" Fund. The Fund was raised as the result of an appeal by His Excellency the Viceroy and amounted to the magnificent sum of over 122 lakhs. Committees were constituted all over India and Burma for the purpose of organising contributions which were obtained not only in the form of subscriptions but by means of fêtes

and race meetings, etc., the sale of flags and Postal Seals, and in this way all classes were enabled to help according to their means. The largest individual donations were those of a lakh each from His Exalted Highness the Nizam and His Highness the Maharaja of Jodhpur, while the Calcutta and the West of India Turf Clubs each contributed 2 lakhs. Of the sums collected in each province each Provincial Committee retained in its hands sufficient to provide for its local needs, the balance being remitted to Simla for the use of the Joint War Committee. This balance amounting to about Rs. 89,54,000 is kept in a separate account on which the Joint War Committee draws as may be necessary. Besides the help thus afforded the Joint War Committee has continued to receive very generous aid from the public in the form of subscriptions and donations. The amount of such during the period 1st January, 31st December 1918 has been Rs. 3,00,914-5-11. The total income of the Joint War Committee during this period has been Rs. 42,49,265-5-9 while the expenditure has been Rs. 36,70,745-7-9, leaving a balance on the 31st December 1918 of Rs. 5,78,519-14-0. This balance does not include the balance of the "OUR DAY" Fund which is kept in a separate account and amounts, exclusive of accrued interest, to Rs. 42,04,000.

The duty of the supply of **motor ambulances** having been recognised as devolving on Government expenditure on these was greatly curtailed during 1918. 10 motor vehicles were supplied during the financial year 1917-18 of which 5 were ambulances, 3 were chars-a-bancs and 2 were lorries.

Mesopotamia.—The relief of the sick and wounded in Mesopotamia continues to be the principal concern of the Joint War Committee. There are now 4 depots in that country, *viz.*, at Basra, Amarah, Kut and Baghdad, while a 5th has recently been established at Hamadan in Persia. During the period January-November 1918, 12,664 packages valued at Rs. 18,43,293-8-0 were sent to Mesopotamia from the Bombay Depot making a total since 2nd August 1916 of 28,449 packages valued at Rs. 47,56,055-8-0. In addition regular consignments have been sent by the Lady Carmichael's Bengal Women's War Fund to Amarah. The Red Cross Commissioner and his staff have been unremitting in their efforts to do all they can for those serving with the Forces and their work has been of inestimable value and has been highly appreciated by those best fitted to judge of it.

Other places.—At the request of the Home Committee supplies valued at Rs. 90,934-1-0 and Rs. 73,611-4-0 have been sent to the Red Cross Commissioner in East Africa and at Alexandria, respectively, while small consignments of spices, etc., are regularly sent to Salonika for the use of Indians serving there.

WOMEN'S WAR WORK IN INDIA.

In England women's war work divides itself into (1) **Voluntary work**, such as the making of comforts and bandages, unskilled attendance in hospitals, the serving of canteens, recreations huts, etc.; (2) **Paid work**, at first mainly connected with the manufacture of munition, now co-extensive with every kind of military and civil activity.

In India for the first three years of the war (with the exception of the paid V. A. D's. in hospitals), only the field of voluntary work was occupied by women. During 1918 women's war work in India entered a new phase. The development was remarkable not so much from the numbers involved as because they caused women's work to be seen from a new angle. It has always been assumed that the Englishwoman in India is enervated by the climate, dependent on frequent changes to the hills, technically unskilled, and, from her social position, unwilling to undertake any kind of hard work. The grinding pressure of war has driven a small handful of Englishwomen to abandon their state of semi-oriental seclusion. This pressure made itself felt in two ways:—first the sailing orders cut women off from their usual freedom of coming and going to and from Europe; in the second place the scarcity of new men to fill up vacancies caused by those who had gone on service obviously pointed to some mobilisation of woman-power. The reserve thus revealed is small but worth mobilising. Medical women have been taken from civil and put into military work, and a sprinkling of unemployed graduate women has been discovered and utilised. Of the unskilled remainder a certain proportion set themselves to acquire such partial training as would fit them for semi-skilled nursing and clerical posts. The rest are content to go only so far as their native common shrewdness will carry them. In this way several hundreds of women have during the year become of service to India, and incidentally prejudices hampering to women's work in this country have broken down. The mobilisation of woman-power which took place in 1918 was largely due to the initiative of the Association of University Women in India. This body established Bureaux in Calcutta and Bombay, opened up new fields of work, found suitable women and regulated the market generally. Later Bureaux were formed in Delhi, Simla and Poona. The Bombay Government opened a National Service Bureau which undertakes some of the duties of the Women's Bureau. Simla made the Women's Bureau the official channel for the recruitment of women, and the usefulness of the Simla Bureau is rapidly increasing.

Indian women have so far taken small part in the movement. One or two have stepped into the medical posts vacated by the Englishwomen called up for military work. On the other hand their voluntary services, under the heading of "Comforts" have been most remarkable. They have shown a generosity, tenacity of purpose and steadiness in the fulfilment of duties undertaken, unsurpassed by women of any other race in the Empire.

Comforts.—During the early years of the war nine-tenths of the energies of women were occupied in supplying "Comforts" for the ill-equipped troops in Mesopotamia, East Africa

and Egypt. During the year a change of policy to meet the changed circumstances of our armies took place. To quote the Indian Comforts for the Troops Fund Report: "It is now recognised on all hands that Government issues of clothing and foodstuffs are sufficiently ample, and varied and do not require to be supplemented by private effort to the same extent as before. The Fund has, therefore, gradually arrived at a policy of concentrating on the physical and mental recreation of the troops. A considerable quantity of Material comforts of the nature of luxuries is still sent. But towards the close of the year the place of these has been taken by books, materials for outdoor and indoor games, etc., etc. ....In the earlier stages of the war when local resources had not been developed and communications were defective officers had no means of obtaining small articles of luxury except through the Comforts Fund. This has ceased to be the case, and it was considered incorrect in principle to continue to apply charitable funds to the provision of comforts for officers."

The following is a list of the chief **comforts fund** in India showing the ladies responsible for their administration :—

Name of Fund.	Hon. Secretary.	Administered by
Indian Comforts for the Troops Fund ..	Mrs. Barstow ..	H. E. Lady Chelmsford.
Women's Branch of the Bombay Presidency War and Relief Fund	Mrs. Orr	Lady Willingdon.
Lady Carmichael's Bengal Women's War Fund	Mrs. Wyness ..	General Secretary, W. R. Gourlay, Esq. C.I.E. — Lady Ronaldshay.
Calcutta Branch, National Indian Association	Mrs. Duval ..	
Lady O'Dwyer's Punjab Comforts Fund ..	....	Lady O'Dwyer.
Northern United Comforts Fund	Mrs. Wall ..	Committee.
Lady Robertson's Central Provinces Comforts Fund	....	Lady Robertson.
Burma Branch, Indian Comforts Fund ..	Mrs. Vale ..	Committee.
Bihar and Orissa	Mrs. Maude ..	....
Ladies War and Relief Association, Secunderabad	Mrs. Dwane ..	Lady Fraser.
War Gifts, Delhi	....	Mrs. Hailey.
Kashmir	....	First Assistant to Resident.
East Indies Station Naval Fund	Mrs. Ramsay ..	Mrs. Gaunt.

Madras and the United Provinces have devoted themselves almost exclusively to Red Cross rather than to comforts work.

Medical Work.—In June 1917 the Government of India applied to the women's medical profession and especially to the Association of Medical Women in India to provide volunteers for civil medical work in order that more officers of the I.M.S. might be set free for service at the front. A number of medical women came forward, but owing to certain difficulties which arose it was found impossible to provide them with civil employment. Their services were therefore placed at the disposal of the military authorities for employment in military hospitals and the first unit of 8 members commenced work at the Freeman Thomas Hospital, Bombay, on November 5th, 1917. The work of this unit having been favourably reported on, a second was called for and 4 members commenced work at the Hyslop War Hospital, Secunderabad, on June 1st, 1918. About the same time, one Lady doctor was appointed as Medical Officer to the Station Hospital Dagshai, to assist in special research work on malaria. All these women are graded as civilian practitioners, sign an agreement for a period of 6 months' service, and receive pay at the rate of Rs. 18 per day. They work directly under the military authorities. A Committee composed of medical women representing the Association of Medical Women in India and the Countess of Dufferin's

Fund advises the military authorities as to the filling of appointments and vacancies.

Nursing.—There has been a considerable increase in the number of women who have taken up nursing as a temporary profession or for the duration of the war. These women are generally known as V. A. D.'s. The minimum qualification which such a woman must possess is the First Aid and Home Nursing Certificates of the St. John's Ambulance Association, or the British Red Cross Society or other similar body. Successful candidates for this work are appointed on probation for a period of one month with pay Rs. 100. On the expiration of the probationary period, they will, if appointed, be under contract as temporary nurses for a further period of six months with pay Rs. 150 per mensem. Temporary nurses thus engaged may be re-engaged for further periods of six months with pay Rs 175 per mensem. Each nurse has to pay her own messing (average Rs. 60 per mensem, more or less) washing and share of personal servant uniform, bedding linen, etc. All particulars may be had from the General Secretary, St. John's Ambulance Association, Indian Headquarters, Simla, and Delhi. Up to date 440 nurses have been recruited, the majority of whom are serving in military hospitals in India. Besides those who have enrolled themselves as temporary nurses, many women have gone through the preliminary training necessary for enrolment, and could be made use of should the demand for V. A. D's. increase at any moment. At present the supply seems to be in excess of the demand. The following figures will show to what extent the desire for training was stimulated by the war.

	Certificates for First Aid.	Certificates for Home Nursing
1911	1,500	121
1914	5,660	403
1917	8,900	932

Thus in six years it is seen that the demand for training increased about 900 per cent. under each head.

As the V. A. D's. are rarely entrusted with any but subordinate, unskilled work in hospitals, it will be realised that the training is of small value and leads to nothing. Women with any real taste for nursing as a career should put themselves through the full pre-war training.

Clerical Work.—The most remarkable development of women's work during the year has been the opening of clerical work in Government offices to women. Among the Government offices which have "diluted" the labour of officers and non commissioned officers by women are: the offices of the Postal Censors; the R. I. M. Offices for decoding telegrams; the Military Accounts Department; the Army Clothing Department: the Embarkation Offices; Military Postal Base Offices; and Brigade Offices. The salaries paid vary from Rs. 100 per mensem to Rs. 270, as the higher salaries are paid in the cities where housing accommodation is extremely difficult, and rents high, the difference is not so great as it looks on paper.

Canteen Work.—This is sometimes paid and sometimes unpaid. A few women are working for the Y. M. C.A. The most important scheme was carried out in a furlough camp in Wellington, where 6,000 soldiers were catered for and the arrangements were made by a paid staff of women officers.

EDUCATION OF SOLDIERS' CHILDREN.

The Government of India issued in April, 1918, a set of rules as a guide to local Governments in the grant of concessions to meet the education of the children of Indian soldiers. The rules are as follows:—

1. The scheme below will apply to the children (boys and girls), of all men of whatever rank, whether combatants or non-combatants, who have since the 4th August, 1914, died while in the active list, duty or become permanently incapacitated owing to wounds or disease contracted while on the active list.

2. A list of all such persons (in a form) showing their place of residence, will be sent by the Adjutant-General to the Collector of each district in British territory for disposal under these rules. A similar list for Native States will be sent to the Secretary, Foreign and Political Department, for such action as that Department may determine. Supplementary lists will be forwarded at the beginning of each calendar year.

3. The Collector, on receipt of the list, will ascertain and record the names and ages of all children under 16 years of age (due regard being had in the case of girls to the customary feelings of the people as regards the recording of such names) of the men mentioned in the list and, subject to proviso (iii) of Rule 4, will communicate to their guardians a certificate for each child stating that he or she, is entitled to the benefit of these rules.

4. Any child producing such a certificate before the head of an educational institution will be entitled, under such rules as may be issued by the local Government, (a) to free primary education, plus a small annual allowance to cover incidental expenses, such as books; (b) to a scholarship in any middle school, such scholarship being of the amount ordinarily given in the province and including (if this is not already the practice) the cost of fees (c) without prejudice to their competency for open scholarships to enter in competition for such scholarships in high schools and colleges as the local Government may reserve for the benefit of persons possessing a certificate as above.

(Note.—When the pupil resides in a hostel and the ordinary scholarship does not cover hostel charges an addition will be made to the scholarship to cover such charges.)

Provided that—(i) a concession or scholarship under these rules may be withdrawn, if, in the opinion of the Inspector of Schools concerned, the progress of the pupil is inadequate or his conduct unsatisfactory; (ii) no scholarship

will be given to a pupil who has not passed such test as may be prescribed for entry into the class of school for which the scholarships will not be open to children who up to the age of 10 have not attended any school.

5. The Government will not interfere with the discretion of the guardians as to the institution to which the child should be sent, and the local Government will make such arrangements as are necessary to recoup the authorities of institutions other than Government institutions to which children may be sent under these rules.

6. It will be open to the officer commanding any military unit to address the Collector concerned for information regarding the education of the children of any man of the unit coming under the category described in rule 1, above, and the Collector will give such information as is possible in reply to such enquiries.

THE INDIAN RAILWAYS.

In the section dealing with the Indian railways (q. v.) the latest figures available at the time are given. But after these pages went to press the railway administration report for the year ended March 1918 was issued. From this the following facts are gleaned; for the purposes of comparison they should be read in conjunction with the main railway section.

According to the latest report, the capital outlay incurred by the Government in the purchase and construction of its railways including the liability which remains to be discharged by means of annuity and sinking fund payments, amounted at the end of 1917-18 to £ 367,438,689.

The Capital outlay incurred in 1917-18 was £ 2,528,571. The grant for the financial year 1918-19 was £ 4.2 millions. During the year the actual capital expenditure fell short of the sanctioned grant for the year by Rs. 311 lakhs; this lapse was due mainly to the difficulties attendant on the supply of railway materials from England.

The actual capital on railways which have been financed by private enterprise amounted at the end of 1917-18 to Rs. 62,22,16,000. The capital expenditure on such lines during the year was as follows:—

	Rs.
Branch Line Companies' Railways .	81,44,000
District Board Lines	3,26,000
Native State Lines	76,70,000
Total ..	161,50,000

The following figures show the statistical result of the working of the Indian railways in thousands.

	£
Capital at charge	366,423
	Rs.
Gross traffic receipts (State railways)	6,89,213
Working expenses	3,13,581
Net receipts	3,75,632
Equivalent in sterling at fifteen rupees to the pound .. .. £	25,042
Percentage of return on capital at charge	6.83

The net working profit from state railways, after meeting interest and other miscellaneous charges, amounted in the year 1917-18 to £ 9,992,134. It would have been more had it not been for the method of accounting adopted under which certain annuity and sinking fund charges which really go to the discharge of debt are included in the railway revenue account.

The working expenses during the year amounted to Rs. 3,136 crores, or only Rs. 1.39 lakhs more than the actual working expenses during the preceding year. The result is remarkable seeing that the receipts for the year exceeded those of the previous year by nearly six crores of rupees.

The number of passengers carried shows a sharp drop, and at the same time an increase in earnings, this is due to the reduction of the train services owing to war conditions and an enhancement of fares which was imposed with a view to discouraging railway travelling.

The tonnage of goods carried fell off somewhat as the result of restrictions imposed on short distance traffic.

The gross earnings of railways other than State lines amounted to Rs. 835.24 lakhs and the net earnings showed an improvement of Rs. 11.40 lakhs only. These net earnings yielded a return on the capital invested Rs. 6,604·58 lakhs of 6 28 per cent.

Special measures were taken through the appointment of controllers to deal with the abnormal traffic conditions which arose from the war activities. The train services had also to be reduced owing to the impossibility of obtaining supplies in order to maintain the rolling stock at its full capacity. The total number of persons killed and injured in the working of the Indian railways during the year was 2,489.

During the war the construction of branch lines through private agency was largely held in abeyance. But promoters were encouraged to develop projects and when the financial year closed proposals embracing 3,708 miles, involving an expenditure of nearly £ 14½ millions were under consideration.

INDIAN WAR MEMORIAL.

The Government of India have decided to establish an Indian War Memorial in order to illustrate the part played by India in the present war. This memorial is to be established at Delhi where suitable accommodation is available and it will be constituted on the lines of the Imperial War Memorial in England, though its scope naturally will not be so wide as it is only proposed to deal with the actual areas where Indian troops have been employed and with the economic assistance and other efforts in which India has been directly concerned. The committee, which has been formed to organise the memorial, will work under the Education Department of Government and its activities will include the collection of trophies, books, official records, newspapers and illustrations in the form of pictures, photographs and posters as well as full information relating to the supply of material, whether in money or kind, by all classes of the community. The Government of India are desirous of acquiring objects of interest for the museum by gift, loan or purchase. Communications on the subject should be addressed to the Secretary to the War Memorial Committee, Gorton Castle, Simla.

PASSPORT REGULATIONS.

The following regulations concerning passports are the chief :—

1. Applications for Indian Passports must be made in the prescribed form, and submitted either direct or through the local authority—(*a*) in the case of a resident in British India, to the Local Government or Local Administration concerned; (*b*) in the case of a resident in a Native State, to the Agent to the Governor-General or Political Resident concerned.

2. The charge for an Indian Passport is Re. 1.

3. Indian Passports are granted to—(*a*) Natural-born British subjects; (*b*) wives and widows of such persons; (*c*) Persons naturalized in the United Kingdom, in the British Colonies or in India; and (*d*) Subjects of Native States in India. A married woman is deemed to be a subject of the State of which her husband is for the time being a subject.

4. Passports are granted upon the production of a declaration by the applicant in the prescribed form of application verified by a declaration made by a *Political Officer, Magistrate, Justice of the Peace, Police Officer not below the rank of Superintendent* or *Notary Public,* resident in India

5. If the applicant for a Passport be a Naturalized British subject, the certificate of naturalization must be forwarded with the form of application to the Officer empowered to grant the Passport. It will be returned with the Passport to the applicant through the person who may have verified the declaration. Naturalized British subjects will be described as such, in which Passports, which will be issued subject to the necessary qualifications.

6. Small duplicate unmounted photographs of the applicant (and wife, if to be included) must be forwarded with the application for a Passport, one of which must be certified on the back by the person verifying the declaration made in the application form.

7. Indian Passports are not available beyond two years from the date of issue. They may be renewed, by any competent British Authority for four further periods of two years each after which fresh Passports must be obtained. The fee for each renewal is Re. 1.

8. Passports cannot be issued or renewed on behalf of persons already abroad: such persons should be told to apply for Passports to the London Foreign Office or nearest British Mission or Consulate. Passports must not be sent out of India by post.

9. In the case of an applicant for a Passport being unable to write English a transcription in English should be placed below the applicant's vernacular signature in the form of application. In the case of an illiterate person, a thumb impression should be substituted for a signature on the form of application, which should be certified by the person verifying the declaration.

Travellers are hereby informed that *visas* and endorsements granted on passports by the Government of Bombay will, in future, be charged for as under :—

Fee for a *visa* on a foreign passport, Rs. 2.

Fee for an endorsement on a British passport, Re. 1.

Fee for renewal of a passport, Re. 1.

THE VICTORIA CROSS.

The announcement, made at the Delhi Durbar in 1911, that in future Indians would be eligible for the Victoria Cross gave satisfaction which was increased during the War by the award of that decoration to the following:—

Sepoy Khudadad, 129th Baluchis.—On 31st October 1914, at Hollebeke, Belgium, the British officer in charge of the detachment having been wounded, and the other gun put out of action by a shell, Sepoy Khudadad, though himself wounded remained working his gun until all the other five men of the gun detachment had been killed.

Naick Darwan Sing Negi, 1-39th Garhwal Rifles.—For great gallantry on the night of the 23rd-24th November 1914 near Festubert, France, when the Regiment was engaged in retaking and clearing the enemy out of our trenches, and, although wounded in two places in the head, and also in the arm, being one of the first to push round each successive traverse, in the face of severe fire from bombs and rifles at the closest range.

Jamadar Mir Dast, 55th Coke's Rifles.—For most conspicuous bravery and great ability at Ypres on 26th April 1915, when he led his platoon with great gallantry during the attack, and afterwards collected various parties of the Regiment (when no British Officers were left) and kept them under his command until the retirement was ordered. Jamadar Mir Dast subsequently on this day displayed remarkable courage in helping to carry eight British and Indian Officers into safety, whilst exposed to very heavy fire.

Rifleman Kulbir Thapa, 2-3rd Gurkha Rifles.—For most conspicuous bravery during operations against the German trenches south of Mauquissart. When himself wounded, on the 25th September 1915, he found a badly wounded soldier of the 2nd Leicestershire Regiment behind the first line German trench, and though urged by the British soldier to save himself, he remained with him all day and night. In the early morning of the 26th September, in misty weather, he brought him out through the German wire, and, leaving him in a place of comparative safety returned and brought in two wounded Gurkhas one after the other. He then went back in broad daylight for the British soldier and brought him in also, carrying him most of the way and being at most points under the enemy's fire.

Lance-Naick Lala, 41st Dogras.—Finding a British Officer of another regiment lying close to the enemy he dragged him into a temporary shelter, which he himself had made, and in which he had already bandaged four wounded men. After bandaging his wounds he heard calls from the Adjutant of his own Regiment who was lying in the open severely wounded. The enemy were not more than one hundred yards distant, and it seemed certain death to go out in that direction, but Lance-Naik Lala insisted on going out to his Adjutant, and offered to crawl back with him on his back at once. When this was not permitted, he stripped off his own clothing to keep the wounded officer warmer and stayed with him till just before dark, when he returned to the shelter. After dark he carried the first wounded officer back to the main trenches, and then, returning with a stretcher, carried back his Adjutant. He set a magnificent example of courage and devotion to his officers.

Sepoy Chatta Singh, 9th Bhopal Infantry.—For most conspicuous bravery and devotion to duty in leaving cover to assist his Commanding Officer who was lying wounded and helpless in the open. Sepoy Chatta Singh bound up the officer's wound and then dug cover for him with his entrenching tool, being exposed all the time to very heavy rifle fire. For five hours until nightfall he remained beside the wounded officer, shielding him with his own body on the exposed side. He then, under cover of darkness, went back for assistance, and brought the officer into safety.

Naick Shahamad Khan, Punjabis.—For most conspicuous bravery. He was in charge of a machine-gun section in an exposed position in front of and covering a gap in our new line within 150 yards of the enemy's entrenched position. He beat off three counter-attacks, and worked his gun single-handed after all his men except two belt-fillers, had become casualties. For three hours he held the gap under very heavy fire while it was being made secure. When his gun was knocked out by hostile fire he and his two belt-fillers held their ground with rifles till ordered to withdraw. With three men sent to assist him he then brought back his gun, ammunition, and one severely wounded man unable to walk. Finally, he himself returned and removed all remaining arms and equipment except two shovels. But for his great gallantry and determination our line must have been penetrated by the enemy.

Lance-Dafedar Govind Singh, 28th Cavalry.—For most conspicuous bravery and devotion to duty in thrice volunteering to carry message between the regiment and brigade headquarters a distance of 1½ miles over open ground which was under the observation and heavy fire of the enemy. He succeeded each time in delivering his message although on each occasion his horse was shot, and he was compelled to finish the journey on foot.

Rifleman Karan Bahadur Rana, Gurkha Rifles.—For conspicuous bravery and resource in action under adverse conditions, and utter contempt of danger during an attack. He with a few other men succeeded, under intense fire in creeping forward with a Lewis gun in order to engage an enemy machine gun which had caused severe casualties to officers and other ranks who had attempted to put it out of action. No. 1 of the Lewis gun party opened fire and was shot immediately. Without a moment's hesitation Karan Bahadur pushed the dead man off the gun, and in spite of bombs thrown at him and heavy fire from both flanks, he opened fire and knocked out the enemy machine gun crew. Then switching his fire on the enemy bombers and riflemen in front of him, he silenced their fire. He kept his gun in action, and showed the greatest coolness in removing defects which had twice prevented the gun from firing. He did magnificent work during the remainder of the day, and when a withdrawal was ordered assisted with covering fire until the enemy were close to him. He displayed throughout a very high standard of valour and devotion to duty.

Racing.

Calcutta.

[*Season* 1917-18],

Viceroy's Cup. Distance 1¾ miles—

H. H. Genl. Nawabzada Obaidulla Khan's Kiltoi (9st. 3lbs.), Ruiz 1

Mr. Goculdass' Politian (9st 3lbs.), Huxley 2

Mr. R. R. S.'s Magyar (9st. 3lbs.), Templeman 3

Also Ran:—Marcianus (9st. 3lbs.), and Wolfaline (9st. 3lbs.).

Won by three lengths ; two lengths. Time —3 mins. 3 4-5 secs.

The Governor's Cup. Distance 1¾ miles—

Mrs. John Peter's One (7st. 11lbs.), J. R. Flynn 1

Mr. Wilton Bartleet's Bedtime (6st. 7lbs.), F. Northmore 2

Mr. Goculdass' Matchlock (7st. 12lbs.), J. Flynn 3

General Nawabzada Obaidulla Khan's Kiltoi (9st. 13lbs.), Ruiz 4

Also Ran :—Marcianus (7st. 13lbs.), Wolfaline (7st. 12lbs.), and Midsand (6st. 7lbs.)

Won by two and a half lengths ; same ; half a length. Time.—3 mins. 2-5 secs.

The Carmichael Cup. Distance 1¾ miles—

Mr. Goculdas' Swanker (8st. 4lbs.), W. Huxley 1

General Nawabzada Obaidulla Khan's Kiltoi (9st. 7lbs.), Ruiz 2

Raikut of Baikanthapur's Bydand (8st. 4lbs.), Harrison 3

Also Ran:—Marcianus (8st 4 lbs.)

Won by three lengths ; six lengths. Time 2 mins. 7 secs.

Metropolitan Plate. Distance 6 furlongs—

Mr. Goculdass' Verge (9st. 11lb.) J. Flynn .. 1

Messrs. Goculdass and Garda's Lalandra (9st. 9lbs.), W. Huxley 2

Mr. Thaddeus' Pastime (8st.) Buckley .. 3

Messrs. Nanji and Ramshaw's Pantomine II. (7st. 4lbs.), J. R. Flynn 4

Also Ran :—Evett (7st. 2lbs.)

Won by one length ; one and three-quarter length ; a neck. Time—1 min. 14 secs.

The Macpherson Cup. Distance St. Leger Course.—

Mrs. John Peter's One (8st. 10lbs.), J. R. Flynn 1

Mr. Goculdas' Matchlock (7st. 13lbs.), J. Flynn 2

General Nawabzada Obaidulla Khan's Kiltoi (9st 12 lbs.), Ruiz 3

Also Ran:—Wolfaline (7st. 9lbs.), The Rocking Horse (7st. 4lbs.), and Bedtime (7st.).

Won by one and three-quarter length; two and half a lengths ; half a length. Time.—3 mins. 9 secs.

City Plate. Distance 1 mile, 3 furlongs—

Messrs. Donetil and Page's Guess (7st. 13 lbs.), Harrison 1

Mr. Baig Mahomed's Bright Bird (7st. 3lbs.), Melsom 2

Mr. Lauder's Second Edition (9st. 3lbs.), Barrett 3

Mr. Pratt's Nancy O'Neil (8st.), J.R. Flynn. 4

Also Ran :—Gibberish (9st. 7lbs.), Sugar Loaf (8st. 5lbs.), Red Quill (8st. 6lbs.), Reigning Star (8st. 3lbs.), Midsand (7st. 12 lbs.), and Yunan (7st. 11 lbs.).

Won by one and a half length ; three-quarter length ; a neck. Time.—2 mins. 29 secs.

Prince of Wales' Plate. Distance 1 mile—

Mr. Goculdas' Gibberish (7st.), J. Flynn .. 1

Mr. Thadders' Pastime (9st.), Ruiz 2

Mr. Hamer's Boss Lee (7st. 2lbs.), Moosamdin 3

Mr. Lauder's Star of India (7st. 4lbs.), Mc. Cowan 4

Also Ran:—Pantomine II (8st. 4lbs.) and Evett (7st. 11lbs.)

Sandown Park Plate. Distance 6 furlongs—

Mr. Goculdas' and Garda's Salandra (9st.), W. Huxley 1

R. R. S.'s Silver Balm (8st. 7lbs.), F. Templeman 2

Mr. Thadder's Pastime (7st. 9lbs.), Buckley. 3

Also Ran :—Pantomine II (7st. 7lbs.) and Symrex (8st. 4lbs.)

Won by one and half length at the finish ; one and quarter length ; one and three-quarter length. Time.—1 min. 13 4-5 secs.

Cooch Behar Cup. Distance 1 mile, 3 furlongs—

Mr. Ainsworth's Giacomi (9st. 11lb.), Rose . 1

Mr. Goculdas' Matchlock (7st. 9lbs.), J. Flynn 2

Mr. Goculdas' Swanker (9st. 3lbs.), W. Huxley 3

Mr. R. R. S.'s Magyar (9st. 8lbs.), F. Templeman 4

Also Ran:—Bydand (8st. 10lbs.), Marcianus (8st 8 lbs.), Onc (8st. 4lbs.), Evett (8st.), Gibberish (7st. 4 lbs.), and Blackmailer (6st. 7lbs.).

Won by only half a length, a head ; two lengths. Time.—2 mins. 20 secs.

Gunny Meah Cup. Distance 1½ miles.—

Mr. Allan's Nareb (9st. 12lbs.), Ruiz .. 1
Mr. Ali bin Talib's Maud (8st.), Rose .. 2
Mr. Galstaun's Pier (7st. 8lbs.), Buckley .. 3

Also Ran.—Lady Marchmint (9st. 11lbs.), Sepaside (8st 8 lbs.), Go on (1st. 7lbs.), Alice (7st. 7lbs.), Tatler (7st.), and Dolly Schomberg (6st. 7lbs., carried 7st. 11lbs).

Won by a neck; two lengths. Time.—2 mins. 42 secs.

[*Season* 1918-19].

Viceroy's Cup. Distance 1¾ miles.—

Mr. Galstaun's Dark Legend (9st.), Huxley . 1
Mr. Walen's One (9st. 3lbs.), Rose 2
Mr. R. R. S.'s Magyar (9st. 3lbs.), Tempieman 3
Mr. Guthrie's Thunder (9st. 11b.), Flynn .. 4

Also Ran:—Ballaghtabin (9st. 3lbs.), Mercianus (9st 3 lbs.), Kiltoi (9st. 3lbs.), Double Scotch (9st.) and First Flier (9st.).

Won by 3½ lengths; 6 lengths between 2nd and 3rd. Time—3 mins. 1 2-5 secs.

King Emperor's Cup. Distance 1 mile.—

Mr. Galstaun's Dark Legend (9st. 3 lbs.), Rose 1
Mr. R. R. S.'s Magyar (9st. 8lbs.), Ruiz .. 2
Mr. R. R. S.'s Quarryman (9st. 3lbs.), Tempieman 3

Also Ran.—Verge (9st. 3 lbs.), Marcianus (9st. 3lbs.), First Flier (9st. 3lbs.) and Bydand (9st. 3lbs.)

Won by 3½ lengths, 1 length between 2nd and third. Time—1 min. 40 3-4 seconds.

Burdwan Cup. Distance St. Leger Course.—

Mr. Walsh's Bodengam (9st. 10lbs.), Burden 1
Mr. Coningham's Blackmailer, (11st. 3lbs.), Williamson 2
Miss R. S. Sevan and Mr. Hilliard's Monsieur Nestor (9st. 10lbs.), Gray 3

Also Ran:—Irish Field (9st. 10lbs.), Wavelet's Dupe (9st. 10lbs.), and Irish Recruit (9st. 10lbs.)

Won by 1½length, 12lengths between second and third. Time. 3 mins. 21 1-5 secs.

Cooch Behar Cup. Distance 2 miles 3 furlongs.—

Mrs. Ainsworth's Little Nan (7st. 2lbs.), Rose 1
Mr. Galstaun's Oros (8st. 6lbs.), carried 8st. 7lbs.), Huxley 2
Mr. Douetil's King's Fare (7st. 12lbs.), J. Harrison 3
Mr. Goculdas' Baronvale (7st. 12lbs.), Flynn .. ..

Won by 1¾ lengths; a short head between the second and third, 1½ lengths between 3rd and 4th Time.—2 mins. 19 1-5 secs.

Grand Annual. Distance 2 miles—

Mr. Walsh's Bodenham (11st. 10lbs.), Barden 1
Mr. Thaddeus' Irish Recruit (10st. 9lbs), Gray 2
Messrs. Swan and Hilliard's Monsieur Nestor (10st 12 lbs.), Hayhoe 3

Won by a head; 1½ lengths between second and third. Time.—3 mins. 46 1-5 secs.

Calcutta Plate. Distance 6 furlongs—

Mr. Goculdas' Verge (9st. 10lbs.), Huxley.. 1
Mr. Walsh's Necessity (7st. 10lbs.), Nortmore 2
Mr. R. R. S.'s Quarryman (9st. 3lbs.), Tempieman 3

Won by lengths; a head between second and third. Time.—1 min. 14¾ secs.

Merchant's Cup. Distance 1½ miles—

Mr. R. R. S.'s Cyanite (9st, 5lbs.) 1
Mr. Ainsworth's Little Nan (8st. 12lbs.) Rose 2
Mr. Glastaun's Cunning (8st. 3lbs.), Flynn.. 3

Won by a short head; ¾ length between second and third. Time.—2 mins. 36 1-5 secs.

International Pony Plate. Distance 7 furlongs.—

Mr. Allan's Nareb (9st. 12lbs.), Ruiz .. 1
Mr. Goculdas' Symptoms (9st. 7lbs.), Huxley 2
Mr. Bate's Masonic (9st. 13lbs.), Northmore 3

Won by ¾ lengths; 1½ lengths between second and third. Time.—1 min. 25 3-5 secs.

Bengal Cup. Distance 7 furlongs.—

Mr. Ghorpadi's Maiden Palm (7st. 11lbs.), Meekings 1
Mr. R. R. S.'s Black Friar (7st. 13lbs.), Pullin 2
Mr. Singh's Wee Lad (8st. 11lbs.), Ruiz .. 3

Won by 2 lengths; 1½ lengths between second and third. Time.—1 min. 30 secs.

Bombay.

Byculla Club Cup. Distance 1½ miles.—

Mr. E. L. F. DeSoysa's Mordennis Walker. 1
Mr. J. Merven's Dersingham (9st. 11b.), Trahan 2
Mr. R. R. S.'s Silver Balm (8st. 11lbs.), F. Templeman 3
Mr. Frank's Rueful (6st. 7lbs. carried 7st. 10 lbs.), Dhondien 4

Also Ran:—Kiltoi (9st. 12lbs.), Spenser (6st. 7lb.) One (9st. 6lbs.), Matchlock (8st. 11b.), Brendan (8st. 3lbs.), Giacomi (7st. 10lbs.), Summer Thyme (7st. 8lbs.), carried (7st. 10lbs.), Screamer (7st. 7lbs.), Red Quill (6st. 7lbs.), carried 7st. 3lbs.), and Our Day (6st. 7lbs.) carried 6st. 10 lbs.)

Won by one and a quarter length; one length; half a length. Time.—2 mins. 34 secs.

The Grand Western Handicap. Distance 1 mile.—

Messrs. J. H. Skelton and W. P. Pechey's Llangeinor (8st. 7lbs.), F. Templeman.. 1

Mr. T. M. Thaddeu's Pastime (8st. 11lb. carried 8st. 4lbs.), Ruiz 2

Mr. R. R. S.'s Bandit (7st. 2lbs. carried 7st. 3lbs.), Collis 3

Mr. E. L. F. DeSoysa's Mordennis (6st. 7 lbs. carried 7st. 2lbs.), Walker .. 4

Also Ran:—Roi D'Ecoses (9st. 12lbs.), Anthracite (7st. 9lbs.) carried (7st. 11 lbs.), Allsilk (6st. 7lbs.) carried 6st. 13 lbs.), Salandra (9st. 5lbs.), Tagamor (8st. 7lbs.), Dersingham (8st. 13lbs.), Brendan (8st. 9 lbs.), Triple Alliance (8st. 7lbs.), Screamer (7st. 9lbs. carried 8st.), Summer Thyme (7st. 6lbs.), carried 7st. 10lbs.), St. Andrews (7st. 11lb.), Carpentia (7st. 1 lb. carried 7st. 2lbs.), Spenser (6st 13.lbs.), and Dress (6st. 10lbs. carried 6st. 13lbs.)

Won by three-quarters length; half a length; one length. Time—1 min. 38 2-5 secs.

Bombay City Plate. Distance 1¼ miles.—

Messrs. J. Stewart and Guthrie's Roi D'Ecosse (8st. 5lbs.) Harrison 1

Messrs. Heath and R. D. Sethna's Brendan (7st. 7lbs.), Collie 2

Genl. Nawabzada Obaidulla Khan's Kiltoi (9st. 3lbs.), Ruiz 3

Mr. M. Goculdass' Politian (8st. 5lbs.), W. Huxley 4

Also Ran:—One (8st. 10lbs.), Tagamor (7st. 3 lbs.) and Dersingham (8st. 5lbs.)

Won by one length; the same; five lengths. Time.—2 mins. 7 4-5 secs.

Hillingdon Plate. Distance 1¼ miles—

Mr. J. Merven's Dersingham (8st. 9lbs.), Trahan 1

Mr. Sorabjee Rustomjee's Triple Alliance (8st. 7lbs.), Harrison 2

Mr. R. R. S.'s Silver Balm (8st. 11lbs.) F. Templeman 3

Mr. J. L. Ainsworth's Giacomi (8st. 3lbs.), Rose 4

Also Ran:—Kiltoi (9st. 12lbs.), Spencer (6st. 13lbs.), Politian (8st. 13lbs.), Matchlock (8st. 2lbs.), Summer Thyme (7st. 11lbs.), Screamer (7st. 10lbs.), and St. Andrews (7st. 4lbs).

Won comfortably by one length; the same, three-quarter length. Time.—2 mins. 7 secs.

e Malabar Hill Plate. Distance 6 furlongs, 41 yards—

Mr. M. Goculdass' Verge (9st. 3lbs.), W. Huxley 1

Mr. J. L. Ainsworth's Radiant (7st. 10lbs.) Rose 2

Messrs. J. Stewart and Guthrie's Roi D'Ecosse (9st. 3lbs.), F. Templeman .. 3

Messrs. M. Goculdas and F. M. Garda Salandra (9st. 3lbs.), J. Flynn 4

Also Ran:—Tagamor (7st. 5lbs.), Tootsie (8st. 5lbs.), Sampier (7st. 2lbs., carried 7st. 3lbs.) and Dersingham (8st. 5lbs).

Won by a neck, half a length, and one length. Time—1 min. 15 secs.

Mansfield Plate. Distance 6 furlongs, 41 yards—

Mr. Sorabjee's Triple Alliance (8st. 5 lbs.). Bowley 1

Mr. T. M. Thaddeus' Pastime (8st. 2lbs.), Ruiz 2

Mr. M. Goculdass' Verge (9st. 12lbs.), W. Huxley 3

Messrs. J. H. Skelton and W. P. Pechey's Llangeinor (8st. 12lbs.), F. Templeman.. 4

Also Ran:—Salandra (9st. 5lbs.), Roi D'Ecosse (9st. 6lbs.), Anthracite (7st. 7lbs.), Radiant (8st. 2lbs., carried 8st. 3lbs.), Carpentia (7st., carried 7st. 11lb.), Black Walnut (7st. 13lbs.), Mazboot (7st. 10lbs.), and Bandit (7st. 6lbs.).

Won by a neck, three-quarter of a length and a head. Time—1 min. 14 secs.

The Flying Plate. Distance 5 furlongs (straight)—

Mr. M. Goculdass' Primrose Morn (8st. 6lbs.), Bowley 1

Mr. M. Goculdass' Forward III (8st.2 lbs.) F. Templeman 2

Mr. M. Goculdass' Forfeit Lass (7st. 4lbs.), Purtoosingh 3

Mr. M. Goculdass' Verge (9st. 12lbs.), W. Huxley 4

Also Ran:—Patrick (8st. 13lbs.), Tootsie (8st. 5lbs.), Radiant (8st. 3lbs.), Black Walnut (8st. 3lbs.), Mazboot (8st. 11b.), Foolish Fancy (7st. 11b., carried 7st. 2lbs.), Dollet (6st. 7lbs., carried 6st. 13lbs.), and Tollendal (6st. 7lbs., carried 6st. 12lbs).

Won by a short head; a head, and half a length.—Time 59 secs.

Turf Club Cup. Distance 1¼ miles—

Mr. M. Goculdass' Ruby Mine (8st. 8lbs.), W. Huxley 1

Genl. Nawabzada Obaidulla Khan's Singer (9st. 11b.), Purtoosingh.. 2

Mr. Heath's Collingwood (9st. 12lbs.), Harrison 3

Messrs. Dara Cowasjee and A. A. Begmahomed's Red Cross (8st. 9lbs.), Mitchell.. 4

Also Ran:—Palermo (6st. 10lbs., carried 7st. 11b.), Kayid (9st. 8lbs.), Longboat (6st. 7lbs.), White Silk (9st. 2lbs.), Gold Fish II. (9st. 2lbs.), Beyrut (9st.), Royal Court (7st.), Rose Hill (6st. 7lbs., carried 7st. 3lbs.), Durban (8st. 5lbs.), Gazal (6st. 12lbs., carried 6st. 13lbs.), Nassau (8st. 11b., carried 8st. 2lbs.), Tawdry (7st. 12lbs.), Black Ivory (7st. carried 7st. 5lbs.), Amir Aswad (6st. 7lbs., carried 6st. 8lbs).

Won by one and a quarter length, three-quarter length, short head. Time.—2 mins. 49 4-5 secs.

The Bombay Derby. Distance 1½ miles—

Mr. Heath's Collingwood (9st. 8lbs.), Bowley. 1

Mr. Heath's Palermo (6st. 4lbs.), Purtoosingh 2

Mr. R. R. S.'s Kayid (9st. 11lbs.), F. Templeman 3

Mr. R. R. S.'s Dartmoor (7st. 4lbs.), Collis.. 4

Also Ran :—Gold Fish II (9st. 5lbs.), Mooltan (8st. 9lbs.), Rose Hill (7st. 8lbs.), and Union (6st. 11lbs.).

Won by three-quarter length: three lengths; one length. Time—2 mins. 52 3-5 secs.

The Gaye Plate. Distance 1¼ miles—

General Nawabzada Obaidulla Khan's Gold Fish II (8st. 7lbs.), Ruiz 1

Mr. Downes' Beyrut (8st. 10lbs.), Trahan.. 2

Mr. F. M. Garda's Nizam-ul-Mulk (7st. 13lbs.), Pullin 3

Messrs. Dara Cowasjee and A.A. Begmahomed's Red Cross (8st. 9lbs., Bowley .. 4

Also Ran :—Collingwood (9st. 12lbs.), Kayid (9st. 7lbs.), Sparrow Hawk (9st.), Tajilmulook (7st. 5lbs.), carried 7st. 11lbs.), Royal Court (7st., carried 7st. 6lbs.), Singer (9st.), Durban (7st. 13lbs.), Gazal (6st. 12lbs.), Tawdry (7st. 12lbs.), and Mooltan (7st. 8lbs.).

Won by three-quarters length; half a length, the same. Time—2 mins. 22 secs.

Tom le Mesurier Plate. Distance 1 mile—

Messrs. Dara Cowasjee and A. A. Begmahomed's Red Cross (9st. 8lbs.), Bowley. 1

Messrs. Mubarak and A. K. Essa's Dartmoor (8st. 2lbs.), Mujeed 2

Genl. Nawabzada Obaidulla Khan's Fury (7st. 8lbs.), Purtoosingh 3

Mr. M. Goculdass' Baloz (9st. 6lbs.), A. Hoyt 4

Also Ran :—Four Aces (8st. 6lbs.), Durban (8st. 4lbs.), Zaki Pasha (9st. 11lb.), Arrow (8st. 6lbs.) and Good Luck (7st. 12lbs.).

Won by three-quarter length; one length; the same. Time.—1 min. 51 secs.

Dealers' Plate. Distance 1 mile—

Mr. R. R. S.'s Kayid (9st. 8lbs.), F. Templeman 1

Genl. Nawabzada Obaidulla Khan's Gold Fish II. (9st.), Ruiz 2

Mr. Heath's Collingwood (9st. 7lbs.), Bowley. 3

Mr. A. S. Oomer's Union Jack (7st. 11b.), Japheth 4

Also Ran :—Palermo (6st. 11lbs.), Money Gold (8st. 10lbs.), East Court (8st. 7lbs.), Ace of Royals (8st. 3lbs.), and Morning Light (8st. 3lbs.).

Won by one and a quarter lengths, a head, one length. Time.—1 min. 50 secs.

Sir Cowasjee Jehangir Plate. Distance 6 furlongs, 41 yards—

Mr. R. H. Gahagan's Durban (8st. 10lbs.), Collis.. 1

Mr. R. H. Gahagan's Ace of Royals (9st.), Ruiz 2

Mr. M. Goculdass' Baloz (8st. 10lbs.), W. Huxley 3

Mr. Ali bin Talib's Money Gold (8st. 9lbs.), Mujeed 4

Also Ran :—East Court (9st. 7lbs.), Nizam-ul-Mulk (8st. 13lbs.), Young Majub (8st. 10lbs.), Tajilmulook (7st. 12lbs.)

Zaki Pasha (8st. 6lbs.), Tawdry (8st. 4lbs), Ajax (8st. 11b.), Zuheir (7st. 12lbs.), Osprey (7st. 6lbs.), and Collector (6st. 10lbs)..

Won by a head, the same and the same. Time.—1 min. 23 secs.

The Gough Memorial Plate. Distance 6 furlongs, 41 yards—

Messrs. A. R. Dakeel and Syed Ahmed's Defender (8st. 5lbs.), Bowley 1

Mr. E. L. F. DeSoysa's Lord Roseberry (7st. 9lbs.), Rose 2

Mr. R. H. Gahagan's Ace of Royals (9st. 4lbs.), Harrison 3

Mr. A. S. Oomer's Union Jack (8st. 3lbs.), Japheth 4

Also Ran :—Tammooz (9st. 12lbs.), Baloz (9st. 5lbs.), Four Aces (8st. 10lbs.), Garland (6st. 7lbs.), Vellard (8st. 9lbs.), Fury (7st. 11lbs.), Investment (7st. 3lbs.), and Quantity (6st. 7lbs.).

Won by half a length, the same, one length. Time—1 min. 23 secs.

Poona.

The Western India Stakes. Distance 1¼ miles—

Mrs. G. E. D. Langley's Caryanda (6st. 12lbs.), Japheth 1

H. H. the Maharaja of Jodhpur's Oros (8st., carried 8st. 3lbs.), Trenoweth .. 2

Mr. M. Goculdass' Baronvale (7st. 11lbs.), Flynn 3

Captain P. Bouvet's Louviers D'Or. (8st. 4lbs.), J. E. L. Harrison 4

Also Ran :—Magyar (9st. 11lbs.), Cyanite (7st. 12lbs.), Thunder (9st. 6lbs.), Calder Vale (9st.), Fiz Yama (9st. 5lbs.), Tagamor (8st. 9lbs.), William the Beau (7st. 12lbs.), Brendan (8st. 5lbs.), Francis Armand (7st. 7lbs.), Ardvreck (8st. 5lbs.), Wolfaline (8st. 2lbs.), Buskin (7st. 13lbs.), Giacomi (7st. 11lbs.), Screamer (7st. 3lbs.), Red Quill (6st. 11lbs.), and Sophie (6st. 7lbs.).

Won by 2½ lengths, ¾ length, 1¼ lengths. Time.—2 mins. 7 3-5 secs.

The Aga Khan's Cup. Distance 1½ miles—

H. H. the Maharaja of Jodhpur's Dark Legend (8st. 10lbs.), Trenoweth .. ..

Mr. J. P. J. Walen's One (9st.), Rose .. 2
Mr. R. R. S.'s Magyar (9st.), F. Templeman 3
Mr. T. M. Thaddeus' Aboukir (8st. 11lbs.), Ruiz 4

Also Ran :—Brendan (9st.), Fiz Yama (9st.), and First Flier (8st. 7lbs.).

Won by 1½ lengths, 6 lengths, 4 lengths. Time.—2 mins. 36 secs.

Trial Plate. Distance 1 mile—

Mr. Summers' Dark Legend (8st. 10lbs.), Trenoweth 1
Mr. M. Goculdass' Verge (9st.), Huxley .. 2
Mr. J. C. Galstaun's First Flier (8st. 10lbs.), Rose 3
Mr. C. N. Wadia's Fiz Yama (9st.), Ruiz .. 4

Also Ran :—Magyar (9st. 7lbs.) and Vallance (8st. 13lbs.).

Won by six lengths, one and half lengths, a head. Time.—1 min. 41 2-5 secs.

The St. Leger Plate. Distance—R. C. and distance—

Mr. N. Begmahomed's Sophie (6st. 7lbs.), Northmore 1
Mr. R. H. Gahagan's Ardvreck (8st. 4lbs.), Lynch 2
Mrs. G. E. D. Langley's Caryanda (7st. 4lbs.), Japheth 3
Mr. J. L. Ainsworth's Giacomi (7st. 6lbs.), Rose 4

Also Ran :—Helford (9st. 8lbs.), Magyar (9st. 6lbs.), Cyanite (7st. 7lbs.), Thunder (9st. 11lb.), Calder Vale (8st. 9lbs.), Aboukir (8st. 13lbs.), Woodland Lass (8st. 7lbs.), Wolfaline (7st. 12lbs.), Matchlock (7st. 10lbs.), Buskin (7st. 7lbs.), Screamer (7st. 2lbs.), and Bright Bird (6st. 10lbs.).

Won by a neck, a short head, 1 length. Time.—2 mins. 48½ secs.

Ganeshkhind Plate. Distance 6 furlongs—

Messrs. M. Goculdass' and F. M. Garda's Salandra (9st. 7lbs.), Flynn 1
Messrs. J. H. Skelton and W. P. Pechey's Llangeinor (9st. 2lbs.), F. Templeman .. 2
Mr. R. R. S.'s Patchy (8st. 3lbs.), Collis .. 3
Mr. Guthrie's Sampier (8st. 7lbs.), Bowley.. 4

Also Ran :—Tagamor (8st. 5lbs.), Triple Alliance (9st. 11lb.), Tootsie (8st. 10lbs.), Black Walnut (8st. 9lbs.) Oros (8st. 3lbs.), Francis Armand (7st. 10lbs.), Giacomi (7st. 10lbs.), We Two (7st. 4lbs.), and Servian (6st. 12lbs.).

Won by ¾ length ; 1 length ; 1 length. Time —1 min. 13 secs.

The Stand Plate. Distance 1 mile—

Mr. M. Goculdass' William The Beau (7st. 2lbs.), Purtoosingh 1
Mr. M. Goculdass' Tagamor (8st. 2lbs.), Flynn 2
Mr. J. L. Ainsworth's Giacomi (7st. 10lbs.), Rose 3
Messrs. J. Stewart and Guthrie's Calder Vale (9st.), Hardy 4

Also Ran :—Sampier (8st. 11lbs.), Anthracite (8st. 2lbs.), Triple Alliance (9st. 11b.), Brendan (8st. 6lbs.), Francis Armand (7st. 8lbs.). Forward III (8st. 5lbs.), Patchy (8st. 2lbs.), Cyanite (7st. 13lbs.). and Buskin (7st. 13lbs.).

Won by 1½ lengths, 10 lengths, short head. Time.—1 min. 49 secs.

The Aga Shamshudin Plate. Distance 7 furlongs—

Mr. J. Stewarts' Anthracite (8st. 2lbs.), Lynch 1
Captain P. Bouvet's Louviers D'or (8st. 8lbs.), Hardy 2
Mr. R. R. S.'s Charcoal (9st.), F. Templeman 3
Mr. M. Goculdass' Tagamor (8st. 10lbs.), Huxley 4

Also Ran :—Pastime (8st. 12lbs.) Sampier (8st. 10lbs.), Forward III (8st. 7lbs.), Poignant (8st. 6lbs.), Francis Armand (7st. 7lbs.), and Servian (6st. 10lbs.).

Won by a head, a short head, a short head. Time.—1 min. 29 secs.

The Poona Plate. Distance 6 furlongs—

Mr. M. Goculdass' Verge (9st. 3lbs.), Huxley 1
Mr. R. R. S.'s Patchy (7st. 4 lbs.) Lynch .. 2
Mr. T. M. Thaddeus' Pastime (7st. 10lbs.), Buckley 3
Mr. M. Goculdass' Forward III. (7st 10lbs.), Poortoosingh 4

Also Ran :—Louviers d'or.

Won by ½ length, ¾ length, ½ length. Time.—1 min. 13½ secs.

The Criterion. Distance 7 furlongs—

Mr. Summers' Oros (7st. 13lbs.), Meekings.. 1
Captain P. Bouvet's Louviers D'or (8st. 7lbs.), Bowley .. ..
Mr. M. Goculdass' Camberley (8st. 2lbs.), W. Huxley .. ..
Mr. Kelso's We Two (7st. 8lbs.), Collis ..

Also Ran :—Francis Armand (8st. 2lbs.), and Helford (7st. 13lbs.).

Won by a neck, two and half lengths, a short head. Time.—1 min. 29 secs.

The Governor's Cup. R. C. and Distance—

Mr. R. H. Gahagan's Gazal (7st. 3lbs.), Lynch 1
Mr. M. Goculdass' Royal Court (6st. 12lbs.), Northmore 3
Mr. R.H. Gahagan's Collingwood (9st. 12lbs.), Hardy 3
Aga Coochich Shah's Longboat (7st. 2lbs., carried 7st. 3lbs.), Rose 4

Also Ran :—Durban (9st.), Hayid (9st. 7lbs.), Dartmoor (9st. 7lbs.), Amaiza (6st. 4lbs.), Ruby Mine (9st. 8lbs.), Sparrow Hawk (8st. 7lbs.), Rose Hill (6st. 7lbs.), Red Cross (9st. 3lbs.), Mandil (9st.), Nawabzada (8st. 11lb.), Mooltan (7st. 5lbs.), Union Jack (7st 4lbs.), and Black Ivory (6st. 13lbs.).

Won by 2 lengths, 10 lengths, 1 length. Time.—3 mins. 17 4-5 secs.

The Turf Club Cup. Distance 1½ miles—

Mr. R. H. Gahagan's Durban (8st. 12lbs.), Hardy 1

Mr. R. R. S.'s Dartmoor (9st. 5lbs.), F. Templeman 2

Major Khusru Jung Bahadur's Amir Aswad (6st 8lbs.), Northmore 3

Mr. N. R. Bolia's Mooltan (7st. 3lbs.), Walker 4

Also Ran :—Collingwood (9st. 12lbs.), Gazal (7st. 13lbs.), Kayid (9st. 5lbs.), Beyrut (9st. 2lbs.), Ruby Mine (9st. 11b.), Sparrow Hawk (8st. 5lbs.), Royal Court(7st. 5lbs.), Red Cross (9st.), Mandil (8st. 12lbs.), Union Jack (7st. 4lbs.), Longboat (7st. 2lbs.), Cessation (6st. 10lbs.), Good Luck (6st. 7lbs.), Angler (6st. 7lbs.), and Hurman (6st. 7lbs.).

Won by 1 length, ¾ length, ¾ length. Time.—2 mins. 51 secs.

Poona Derby. Distance 1½ miles—

Mr. R. R. S.'s Dartmoor (8st. 3lbs.), Collis .. 1

Mr. Ali bin Talib's Mandil (8st. 3lbs., carried 8st. 6lbs.), Ruiz 2

Mr. R. H. Gahagan's Dandelion (8st. 3lbs.), Bowley 3

Mr. Heath's Palermo (7st. 5lbs.), Meekings .. 4

Also Ran :—Amir Aswad (9st.), Morning Light (8st. 11lbs.), Angler (8st. 7lbs.), Fairy Gold (8st. 7lbs.), Solar Star (8st. 3lbs.), Raven (8st. 2lbs.), Balloon (8st. 2lbs.), Warminster (8st. 2lbs.), Tasmania (7st. 5lbs.), and Hurman (7st. 13lbs.).

Won by half a length, six lengths, three and half lengths. Time.—2 mins. 54 secs.

The Arab Champion Plate. Distance—R. C. and distance—

Mr. R. H. Gahagan's Durban (8st. 13lbs.), Lynch 1

Mr. R. H. Gahagan's Collingwood (9st. 3lbs.), Bowley 2

Mr. R. R. S.'s Dartmoor (8st. 13lbs.), F. Templeman 3

Won by 2 lengths, 3 lengths. Time—3 mins. 11 secs.

H. H. The First Aga Khan's Commemoration Plate. Distance 1¼ miles—

Mr. R. R. S.'s Dartmoor (8st. 9lbs.), F. Templeman 1

Mr. Gahagan's Collingwood (9st. 5lbs.), Bowley 2

Mr. Ali bin Talib's White Silk (8st. 13lbs.), Ruiz 3

Mr. Dara Cowasjee's Red Cross (9st. 11b.), Trahan 4

Also Ran :—Money Gold (8st. 5lbs.), Sparrow Hawk (8st. 5lbs.), Longboat (8st. 5lbs.), and Balloon (8st. 2lbs.).

Won by 1¼ length, a neck, a short head. Time.—2 mins. 23 secs.

The Arab Pony Derby. Distance 6 furlongs—

Mr. Ali bin Talib's Mandil (8st. 12lbs.), Ruiz 1

Mr. R. H. Gahagan's Ace of Royals (9st. 2lbs.), Bowley 2

Mr. M. Goculdass' Four Aces (8st. 12 lbs.), Huxley 3

Mr. Heman's Diamond King (8st. 5lbs.) .. 4

Also Ran :—Najdi (8st. 12lbs.), Warminster (8st. 12lbs.), and Justice (8st. 4lbs.).

Won by a short head, 3 lengths, 1 length. Time.—1 min. 22 secs.

Cecil Gray Plate. Distance 6 furlongs—

Mr. Ali bin Talib's Khundil (late Candle) (8st. 7lbs.), Ruiz 1

Mr. Lucoque's Beadmaster (7st. 9lbs.), Meeking 2

Mr. Downes' Rare Find (8st. 3lbs.), Trahan . 3

Mr. M. Goculdass' Mechanic (8st. 3lbs.), Purtoosingh 4

23 Started.

Won by a head, 3 lengths, 3½ lengths. Time.—1 min. 23 secs.

Lucknow.

Civil Service Cup. Distance 6 furlongs—

Mr. John Peter's Lady Bunny (10st. 7lbs.), Ruiz 1

Sirdar Jewan Singh's Toylene (8st. 7lbs.), Quinn 2

H. H. the Maharaja of Patiala's Little Wonder (8st. 9lbs.), Trahan 3

Mr. Sydney Smith's Avanti (7st. 4lbs.), Thakur 4

Also Ran :—Maud (8st. 7lbs.), Army (7st. 10lbs., carried 7st. 12lbs.), Bonnie Blush (7st. 6lbs.), Gold Mohur (7st. 3lbs.), Apple Juice (7st. 2lbs.), Token (7st. 2lbs.) and Lady Malwood (6st. 7lbs., carried 6st. 10lbs.).

Won by three lengths, three-quarter length and half length. Time—1 min. 16 secs.

Lucknow Derby. Distance 1¼ miles.—

Mr. Hamir's Short Skirt (8st. 11lbs.), Ruiz .. 1

Mr. Walsh's Eagle's Nest (9st. 7lbs.), J. Flynn 2

H. H. the Maharaja of Patiala's Le Soleil (9st 6lbs.), Trahan 3

Mr. Newbury's Monsoon (6st. 9lbs., carried (7st.), Melsom 4

Also Ran :—Bezek (7st. 4lbs.), Mayfly IV (7st. 2lbs.), and Pomade (6st. 12lbs., carried 7st. 3lbs.).

Won by three-quarter length, four lengths. Time—2 mins. 9 3-5 secs.

Murray Cup. Distance 1 mile—

Mr. Hameed's Hameedia (9st. 12lbs.), J. Flynn 1

Mr. Mathradas Goculdas' R. G. (9st. 10lbs.), Trahan 2

Sirdar Jewan Singh's Major-General (8st. 11lbs.), Quinn 3

H. H. the Yuvaraj of Mysore's Tango III (7st. 13lbs.), Melsom 4

Also Ran :—Hard Cash (7st. 12lbs.), Amphitryon (7st. 7lbs.), and Red Virgin (6st.).

Won by half a length, three lengths, four lengths. Time—1 min. 4-5 secs.

Points Cup. Distance 6 furlongs.—

Sirdar Jewan Singh's Toylike (9st. 7lbs.), Quinn 1

Mr. Sattar's Token (7st. 12lbs., carried 7st. 13lbs.), J. Flynn 2

Sirdar Jewan Singh's Ormy (8st. 2lbs.), Barrett 3

Mr. Sydney Smith's Avanti (7st. 12lbs.), Thakur 4

Also Ran :—Little Wonder (9st. 6lbs.), Gold Mohur (7st. 8lbs.), and Lady Malwood (6st. 11lbs., carried 6st. 12lbs.).

Won by one and a half lengths ; a short head ; one and quarter length. Time—1 min.

Patiala Cup. Distance 1 mile—

Mrs. White's Gipsy King (6st. 8lbs.), Melsom 1

Mr. Basheer Ali's Maud (9st.), J. Flynn .. 2

Mr. J. D. Scott's Sea Lad (9st. 12lbs.), Barrett 3

Sirdar Jewan Singh's Mavourneen (7st. 13lbs.), Northmore 4

Also Ran :—Amalgam (8st. 11lbs.).

Won by a short head, one and three-quarter lengths, two lengths. Time.—1 min. 46 1-5 secs.

Great Oudh Handicap. Distance 6 furlongs—

General Raja Hari Singh's Pharaoh (6st. 8lbs., carried 6st. 11lbs.), Moosamdin .. 1

H. H. the Yuvaraj Mysore's Peshwa (7st. 5lbs.), Northmore 2

Jr. Rennett's Murbrook (7st. 3lbs., carried 7st 5lbs.), Mycowan 3

Sirdar Jewar Singh's The Winner (9st. 7lbs.), Quinn .. / Major Mecleverty's New Market (7st. 2lbs., carried 7st. 5lbs.), ... } Dead heat. 4

Won by one length, same head between third and dead heater. Time—1 min. 25 secs.

Gwalior Cup. Distance 7 furlongs—

Mr. Walsh's Eagle's Nest (8st. 5lbs.), J. Flynn 1

Mr. Hamer's Short Skirt (7st. 7lbs.), Barratt. 2

H. H. the Maharajah of Patiala's Mayboy (9st. 12lbs.), Trahan 3

Mr. Hamer's Boss Lee (9st. 12lbs.), Hayhoo 4

Won by a short head, two and a half lengths, two lengths. Time—1 min. 29 4-5 secs.

Bangalore.

Maharajah of Mysore's Cup. Distance 1 mile.—

A handicap for country-bred horses—

H. H. the Maharajah of Mysore's Maple (9st. 12lbs.), J. Rose 1

Col. J. Desaraj Urs' Miss Twistum (6st. 10lbs.), Purtoo Singh 2

Betting : 6 to 4 on Maple, 2 to 1 against Miss Twistum, and 3 to 1 Sheila.

Won by just a neck. Sheila half a dozen lengths behind. Time.—1 min. 54 4-5 secs.

Bangalore Cup. Handicap for horses in the second division. Distance 1¼ miles—

Mr. J. C. Galstaun's Gunning (8st. 12lbs.), Melsom.. 1

Mr. J. Mullick's Don't-Be-Late (6st. 4lbs.), Purtoo Singh 2

Mr. J. L. Ainsworth's Margreen (8st. 12lbs.), Rose 3

Also Ran :—Philanthropist (9st. 5lbs.), Trevella (8st. 13lbs.), and Miss Drake (6st. 11lbs.).

Won by 1 length, 1 length, ½ length. Time. —2 min. 11 secs.

Barrackpore.

Pony Derby. Distance 1 mile—

Mr. Ghosal's Slippery Ann (9st. 2lbs.), Cornwell 1

Dr. John Carr's Bobby (8st. 13lbs.), Wallace. 2

Also Ran :—Encore (10st. 6lbs.), Blackwell (16st. 5lbs.), Post Entry (7st. 6lbs.), and Refund (6st. 8lbs.).

Won four lengths, two lengths. Time.— 1 min. 51 secs.

Barrackpore Derby. Distance 1¼ miles—

Mr. Caufield's Bide-A-Wee (7st. 3lbs.), Wallace 1

Mr. Hale's Mahoney Boy (10st. 2lbs.), Fenton 2

Mr. Rae's Exchange (8st. 11b.), Native .. 3

Also Ran :—Pekinese (9st. 2lbs.).

Won by half a length, one length. Time— 2 mins. 20 secs.

Rawalpindi.

Punjab Army Cup. Distance 2 miles over eight flights—

Captain V. U. Spooner's St. Aubyn (12st. 3lbs.), Captain Bernard 1

Mr. A. V. James' The Count (9st.), Brake 2

Captain T. F. S. Burridge's White Patch (10st. 3lbs.), Owner 3

Also Ran :—Rupert (12st. 3lbs.), Taxilla (12st. 3lbs.), and Pull Through (10st. 3lbs.).

Won by twenty lengths, ten lengths. Time—4 mins. 8 2-5 secs.

Punjab Army Cup Chase. Distance 2½ miles—

Major C. Campbell's Destiny (12st. 3lbs.), Captain Lewis 1

Captain Spooner's St. Aubyn (12st. 13lbs.), Captain Bernard 2

Captain Methven's Bombay Duck (12st. 3lbs.), Mr. Hobbs 3

Also Ran :—Sunstar (12st. 3lbs.), Rupert (12st 3lbs., carried 12st. 4lbs.), and Pull Through (10st. 3lbs, carried 10st. 6lbs.).

Won by two lengths, three lengths. Time—6 mins. 22 secs.

Great Northern Plate. Distance 7 furlongs—

Hakim Mahomed Yusaf's Dilkusha (9st. 4lbs.), Hayhoe 1

Major G. N. Hutton's Camille (9st. 13lbs.). Captain Bernard 2

Lieut. E. L. Mackenzie's Piecrust (9st. 10lbs.), Captain Burridge 3

Also Ran :—Astronomer (9st. 13lbs.), and Cherson Bill (7st. 10lbs.).

Won by three-quarter of a length, one length. No time taken.

Rawalpindi Cup. Distance 7 furlongs—

Mr. Sydney Smith's Awanti (8st. 3lbs.), Thakar 1

Captain Burridge's Lorna (8st. 5lbs.), Fitzgibbons 2

Mrs. White's Gipsy King (7st. 5lbs.), Melsom 3

Major J. Lee's Little Eva (7st. 11lb.), Mossambin 4

Also Ran :—Lady Marchmint (10st. 7lbs.), Maud (9st. 4lbs.), Bonnie Blush (7st. 11lb.) Lady Lyrie (7st. 7lbs.), and Sincere (6st. 3lbs.).

Won by three-quarter length, half a length, a neck. Time—1 min. 34 3-5 secs.

Stand Plate. Distance 2 miles over eight flights—

Mr. E. Comfort's Simson (9st., carried 9st. 5lbs.), Owner 1

Captain Burridge's Lorna (9st. 9lbs., carried 9st. 12lbs.), Owner 2

Mr. Thompson's Turbulent (11st. 13lbs.), Hayhoe 3

Also Ran :—Monsoon (9st. 13lbs.), Taxilla (9st. 3lbs.), and Mapleleaf (9st. 11lb.).

Won by two and a half lengths, one and a half lengths. Time—4 mins. 27 2-5 secs.

Giant Pony Plate. Distance 6 furlongs—

Lieut.-Col. Holden's and F. D. Scott's Lady Marchmint (10st. 7lbs.), Dick .. 1

Colonel Smallwood's Bonnie Blush (7st. 12lbs.), Rose 2

Major J. Lee's Little Eva (7st. 4lbs., carried 7st. 5lbs.), Jafflr 3

Also Ran :—Maud (9st. 5lbs.), and Maori King (7st., carried 7st. 11lb.).

Won by half a length, three-quarter length. Time.—1 min. 23 1-5 secs.

STEEPLECHASING.

Calcutta.

Indian Grand National. Distance 3 miles—

H. H. the Maharaja of Cooch Behar's Larrikin (11st.), Seastream 1

Messrs. Swan and Hilliard's Footsteps Fearless (10st. 2lbs.), Heron 2

Mr. Pugh's Dynevor Park (10st. 4lbs.), Scott 3

Mr. Henderson's Chevalier (9st. 6lbs.), Parker 4

Also Ran :—Knight's Key (10st. 11lbs.), Brandichoc (10st. 8lbs. (fell), Arizona Bill (9st. 11lbs.), Treba (9st. 9lbs.), and Sea Lad (9st. 3lbs.), (fell).

Won by three lengths ; fifty lengths ; seven lengths. Time.—6 mins. 1 4-5 secs.

Grand Annual. Distance 2 miles—

Mr. Edward's Whippoorwill (10st. 7lbs.), Heron 1

Mr. Walsh's Bodenham (10st. 13lbs.), Seastream 2

Mr. Goculdass' Knights Key (11st. 4lbs.), Clarke 3

Also Ran :—Scotch Plaid (9st. carried 9st. 11lb.).

Won by four lengths ; twelve lengths. Time.—3 mins. 43 4-5 secs.

LAWN TENNIS.

Bengal Championships.—

Men's Singles—

Z. Shimidzu beat L. S. Deane, (6-4), (0-6), (4-6), (6-3), (6-2).

Men's Doubles—

L. S. Deane and N. B. Deane beat N. F. Warden and A. W. Shallow, (6-4), (6-3), (4-6), (6-2).

Ladies' Singles—

Mrs. Molesworth beat Mrs. Berthoud, (7-5), (6-0).

Mixed Doubles—

Mrs. Molesworth and L. S. Deane beat Mrs. Keays and Z. Shimidzu, (6-3), (8-6).

Bombay Western India Championships—

Men's Singles—Shimidzu beat Ranga Rao, (6-4), (6-1).

Men's Doubles—England and Cheetham beat Maoroji and Engineer, (7-5), (8-6).

Mixed Doubles—Mrs. Reynolds and Irwin beat Lady Tata and Ranga Rao.

Simla Tournament—

Men's Singles—Crawford.

Ladies' Singles—Mrs. Heathcote.

Men's Doubles—Kunwar Maharaj Singh and Green.

Mixed Doubles—Mrs. Hutcheson and Captain Ashton.

Delhi Tournament.—

Men's Singles—

P. Smith beat Hamed Nagi, (6-0), (6-2), (6-4).

Men's Doubles—

Smith and Mant beat Moss and Hay, (6-4), (8-6), (6-4).

Mixed Doubles—

Captain and Mrs. Moss beat Captain Hay and Mrs. Leslie Jones, (6-3), (3-6), (6-4).

Poona Gymkhana Handicap Tournament—

Ladies' Doubles—Mrs. Jackson and Mrs. Stanger Leather.

Men's Doubles—Carr and Copeland.

Ladies' Singles—Mrs. Turner (W. O.)

Mixed Doubles—Copeland and Mrs. Lory.

Baroda Tournament.—

Men's Singles—

Wagle beat Chinmulgand (6-4), (6-0).

Men's Doubles—

Sunderdas and Mankeshardas beat Narsargdas and Bharpur Singh, (3-6), (6-1), (6-2).

Mixed Doubles—

Lady Tata and Ranga Rao beat Mrs. Row and Sleem, (6-3), (6-4).

G. I. P. Ry. Tournament—

Men's Singles—J. Scott (Harda) beat A. Goldney (Bombay), (6-1), (6-4).

Men's Doubles—A. Goldney and E. Brown (Bombay) beat Cordell and Evans (Bina), (6-4), (6-2).

Mixed Doubles—J. Scott and Mrs. Scanlon (Harda) beat Brown and Mrs. Gwynne (Bombay), (5-7), (6-1), (6-3).

Conder Tournament—

Burn and Gunther beat R. A. Wagle and H. R. Dastoor.

HOCKEY.

Aga Khan Cup (Bombay)—

Hornets	.. 1 goal
Lusitanians S. C.	.. *Nil.*

Beighton Cup (Calcutta)—

B. I. Association, Lucknow ..	.. 4 goals
Asansol Institute	.. *Nil.*

Aga Khan Junior Cup (Bombay)—

Cathedral High School ..	.. 1 goal
St. Xavier's College	.. *Nil.*

FOOTBALL.

Murray Cup (Lucknow)—

Training Battalion	.. 1 goal
Border Regiment	.. *Nil.*

Murree Brewery Cup—

Royal Sussex "A"	.. 2 goals
Durham L. I.	.. *Nil.*

Y. M. C. A. League (Bombay). Colaba War Hospital.

GOLF.

NASIK.

Bombay Cup—
(1) G. Begbie.
(2) R. D. England and D. Walker.

Nasik Cup—
(1) D. Walker.
(2) T. Begbie.

Handicap Foursomes—
(1) E. E. Coombs and D. Walker.
(2) G. Begbie and T. Begbie.

Captain's Cup—
(1) J. H. Hardie.
(2) W. F. D. Fisher.

Allied Pairs—
(1) Mr. and Mrs. W. R. G. Smith.
(2) Mr. and Mrs. W. Reid.

Officers' Competition—
(1) Captain G. N. Brandon.

President's Cup—
(1) F. Boyd.
(2) G. Begbie.

Handicap Cup—
(1) C. S. C. Harrison.
(2) E. E. Coombs.

Silver Medal—
(1) D. Walker.

Challenge Shield and Gold Medal—
(1) G. Begbie.
(2) T. Begbie.

Ladies' Handicap Competition—
(1) Mrs. Aitchison.
(2) Mrs. Duxbury.

Bombay Bangle—
(1) Mrs. Baird.
(2) Mrs. England.

Ladies' Foursomes—
(1) Mrs. A. V. Anderson and Mrs. Aitchison.
(2) Mrs. Baird and Mrs. England.

Ladies' Putting Competition—
(1) Mrs. Aitchison.
(2) Mrs. Mould.

Silver Medal (Ladies')—
(1) Mrs. Baird.

POLO.

Bangalore Tournament (Calcutta)—

Bangalore Gymkhana	.. 3 goals
26th Light Cavalry	.. 2 goals

Carmichael Cup (Calcutta)—

Behar Light Horse	.. 3 goals
Surma Valley Light Horse ..	.. 2 goals

Ajmere Tournament—

Ajmere Gymkhana	.. 2 goals
Bhopal Lancers	.. 1 goal

Murree Brewery Cup (R'Pindi)—

30th Cavalry	.. 4 goals
4th Cavalry	.. 2 goals

WIRELESS TELEGRAPHY.

The annual report of the Indian Telegraph Department for 1915-16 states that the number of wireless stations in India and Burma has increased from 9 in 1910-11 to 19 in 1915-16. The number of messages dealt with in the latter year by the nine coast stations was 83,719.

Licences to Officers.—The Government of India have decided that the granting of licences to military officers in respect of wireless telegraph apparatus used for experimental purposes shall be regulated by the following general principles: (1) When an officer conducts experiments in wireless telegraphy in his official capacity at the expense of Government no licence is required, but only executive permission, which may be given so far as the Telegraph Department is concerned by the Director-General, Posts and Telegraphs.

(2) When an officer carries on experiments as a private individual at his own expense, he must obtain a licence. If the approval of the military authorities is required to what he proposes to do, he should obtain such approval before the Director-General, Posts and Telegraphs, is approached. The licence will then be submitted by the Director-General, Posts and Telegraphs, for the sanction of the Government of India.

(3) With reference to the above, attention is drawn to the necessity for applying for licences to own and use wireless telegraphy apparatus or installations, experimental or otherwise. Applications for such licences will be submitted through the Chief of the General Staff and will contain particulars regarding the apparatus showing (*a*) system it is proposed to employ, (*b*) maximum range of signalling with applicant's own receiving apparatus, (*c*) power (current and voltage), (*d*) source of power.

Chronicle of the year 1918.

JANUARY.

1st.—Indian New Year Honours list chiefly characterised by recognition of splendid work done by Princes and Peoples of India in connection with the war. Increased permanent salutes granted to fifteen ruling Princes and Chiefs and increased personal salutes to sixteen. Among other ruling Princes and Chiefs on whom various distinctions were bestowed, Nizam of Hyderabad was granted the title of "His Exalted Highness" as hereditary distinction, and Rao of Cutch given title of Maharao as hereditary distinction. Other honours included five K.C.B., six K.C.I., eight C.S.I., four K.C.I.E., twenty-eight C.I.E. and eight Knighthoods.

H. E. the Viceroy and Rt. Hon. E. S. Montagu, Secretary of State for India, received at Government House, Bombay, deputations from Central Provinces and Berar regarding Reform Scheme.

2nd.—Viceroy and Secretary of State left Bombay, former for Delhi and latter on visit to Maharaja of Gwalior.

Maharaja of Mysore opened Mysore-Arsikere Railway, which brings Mysore City into more direct communication with Poona and Bombay.

6th.—First Sunday in New Year Special Intercession Services in connection with war were on initiative of H. M. King-Emperor, held in places of worship of all denominations throughout India.

7th.—Railway Conference Association met in Simla under presidency of Sir Robert Highet, who, in presidential address specially referred to organisation of railways to meet exigencies of war conditions.

8th.—Informal meeting in Servants of India Society Home, Bombay, under chairmanship of Jagadguru Shri Shankaracharya of Karvir, to concert measures for organisation of Indian Academy on lines of French and British Academies.

9th.—Indian Science Congress meeting in Delhi, over 300 delegates present.

15th.—H. E. the Governor of Bombay met representative citizens of City to discuss high prices and exorbitant house rents, with a view to remedy growing difficulties caused by them, and announced that Government proposed to appoint Controller and non-official committees to deal with them.

20th.—General Sir Beauchamp Duff, ex-Commander-in-Chief in India, found dead in bed in London club, through (as coroner's jury subsequently found) accidental overdoze of veronal.

25th.—Count Hertling, German Imperial Chancellor, addressing Reichstag, said German military position was never so favourable and rejected British Premier's and American President's statements of peace terms.

30th.—*Gazette of India* Extraordinary published Rules under Defence of India Act for maintenance of supply of commodities in general use.

31st.—Report of Public Works Department Reorganisation Committee (1916) published in Delhi. Report specially recommended gradual transfer of local works to local Government bodies and engagement of private enterprise for execution of public works.

FEBRUARY.

4th.—Obituary: Dowager Countess of Mayo, widow of former Viceroy of India.

Lord Sydenham, ex-Governor of Bombay, contributed articles to *Times* on hydro-electric potentialities in India and declared prospects held out by Tata Sons & Co.'s magnificent Koyna River Scheme to be immense.

6th.—Imperial Legislative Council, Delhi, Viceroy presiding. His Excellency spoke at great length on India's contributions to the war and on administrative affairs. Hon. Sir William Meyer, Member for Finance, introduced Income-Tax Act Amendment Bill, which recasts Act of 1886 with view to improvement of administration and Bill was referred to Select Committee.—Cinematographs Bill introduced and referred to Select Committee.—Indian Forests Act Amendment Bill introduced.—Resolution by Hon. Mr. Sarma recommending redistribution of provincial areas on language basis as preliminary to constitutional reforms rejected.

8th.—Royal Proclamation in Delhi establishing branch of Royal Mint in Bombay for purpose of coining gold coins.

13th.—Government of Bombay announced appointment of Controller of Prices in City of Bombay, to be assisted by Committees and Assistant Controllers.

19th.—Imperial Legislative Council, Delhi, Hon. Sir George Lowndes presiding.—Usury Bill introduced and referred to Select Committee.—Indian Coinage Act Amendment Bill, providing for substitution of nickel two-anna piece for silver two-anna piece at present current, introduced.—Bill to levy a Cess on Indigo exported from British India (for the purposes of raising funds to assist indigo industry) introduced.—Non-official resolutions.

20th.—Bombay Government published Bill to restrict increase of rents of dwelling houses and business premises in the Presidency.

24th.—Obituary: Earl of Brassey, father of Lady Willingdon, wife of Governor of Bombay.

25th.—Hon. Sir Irbrahim Rahimtoola, Kt., C.I.E., gazetted Member of the Executive Council of Governor of Bombay.

27th.—Imperial Legislative Council, Delhi, Hon. Sir George Lowndes presiding.—Bill to amend Indian Forests Act, 1878, considered and passed.—Bill to enable Bombay Government to appoint Assistant Resident and Additional Sessions Judge at Aden passed.—Non-official resolutions.

28th.—Imperial Legislative Council.—Non-official resolutions.

MARCH.

1st.—Imperial Legislative Council, Delhi, Viceroy presiding.—Hon. Sir W. Meyer, reading his financial statement, showed that revenue position excellent, receipts from railways having broken record and far exceeded estimates. Revised estimate for 1917-18 showed surplus of £8 millions, Imperial surplus being £5·8 millions. Estimate for 1918-19 showed revenue surplus £2.3 millions, but Sir W. said, Government would need every penny of this and more if possible to meet ways and means difficulties and there could be no reduction of taxation while war conditions lasted.

5th.—Imperial Legislative Council.—Indian Army Act Amendment Bill, bringing various disciplinary provisions up to date, introduced and referred to Select Committee.—Indian Coinage Act Amendment Bill passed.—Aden Criminal Justice Bill passed.—Cinematographs Bill passed.—Non-official resolutions.

8th, 9th, 12th.—Imperial Legislative Council: Budget discussion.

13th.—Bombay Legislative Council, Bombay, Governor presiding.—Financial statements for 1918-19 presented by Hon. Mr. Carmichael, who pointed out financial situation was extremely satisfactory, especially as regards its most marked feature, namely, rapid increase shown in Provincial revenues.

Imperial Legislative Council.—Bill to control withdrawal of capital from money market by companies introduced by Finance Member and Bill to afford special protection in respect of civil and revenue litigation of Indian Soldiers serving under war conditions by Home Member.—Non-official resolutions.

14th.—Bombay Legislative Council: Budget discussion.

Imperial Legislative Council.—Income-Tax Amendment Bill passed.

15th.—Bombay Legislative Council.—Rent Bill introduced and referred to Select Committee.

18th.—Imperial Legislative Council.—Bill to amend I.D.F. Act, 1917, aiming at expansion of the forces, introduced and passed.—Non-official resolutions.

19th.—Imperial Legislative Council.—Indian Soldiers Litigation Bill passed.—Non-official resolutions.

21st.—Bombay Legislative Council.—Bill further to amend Bombay Medical Act introduced and referred to Select Committee.—Bill to declare law in force in territory ceded for purposes of B. B. & C. I. Railway in Baroda State introduced and passed through all stages.—Non-official resolutions.

22nd.—Bombay Legislative Council.—Non-official resolutions.

Imperial Legislative Council.—Usury Bill and Bill to control withdrawai of capital from money market passed.—Council adjourned *sine die*.

Viceroy, in presence of members of Imperial Legislative Council, unveiled Memorial Bust of late Hon. Mr. G. K. Gokhale in main entrance to Council Chamber.

23rd.—Obituary: Sir John Anderson, Governor of Ceylon, in Colombo.

24th.—Bombay Legislative Council.—Rent Bill passed.

Correspondence between Indian and Home Governments regarding Indian Labour Emigration to more distant Crown Colonies published in Delhi, general import being approval given to proposals to afford means to enable Indian labourers to migrate into Colonies wanting them while eliminating as far as possible unsatisfactory features hitherto associated with emigration of this kind.

25th.—Annual Meeting Bombay Chamber of Commerce, Hon. Mr. M. N. Hogg addressing Chamber on commercial and financial affairs as retiring President.

26th.—British forces having defeated Turkish Army at Ramadieh, on Euphrates, reached Salahiyeh, on Aleppo Road.

28th.—Turks defeated and five thousand prisoners and great quantities of guns and material captured at Baghdadieh, on Euphrates, this victory finally stopping Turkish proposals for advance down Euphrates against left flank of British forces in Mesopotamia.

APRIL.

2nd.—Prime Minister cabled to Viceroy saying, "..... I have no doubt that India will add to the laurels it has already won and will equip itself on an even greater scale than at present, by which bulwark largely save Asia from the tide of oppression and disorder which it is the object of the enemy to achieve."

4th.—Hon. Sir W. Meyer opened Tata Industrial Bank, Bombay.

19th.—First Bombay Co-operative Conference opened, under chairmanship of Hon. Mr. Lallubhai Samaldas, C.I.E.

Lord Lamington, former Governor of Bombay, addressing Society of Arts, referred to tremendous supplies of water for factory power in southern part of Bombay Presidency and suggested that Government should make complete survey of these and other sources, with view to their conversion for mechanical purposes.

26th.—Annual Meeting of Bombay Millowners' Association. Hon. Sir Dinsha Wacha, President, reviewing outlook, urged prudence and courage in meeting the new economic conditions arising.

27th.—Special War Conference opened in Delhi. Viceroy presided and read stirring exhortation from H. M. King-Emperor. Two committees, on Man-power and on Resources, respectively, appointed.

29th.—War Conference, Delhi. Resolutions expressing India's loyal response to His Majesty's Message adopted; also resolutions recommending Government of India to adopt recommendations by sub-committees on Man-power and Resources.

30th.—Governor laid Foundation Stone of new Seamen's Institute (Missions to Seamen) in Bombay, paying homage to noble bravery with which mercantile marine had kept sea communications going during war and appealing to people to subscribe funds to make new Institute a worthy tribute from Bombay. Statement by Committee showed over two lakhs already subscribed and Rs. 5 lakhs required to complete scheme and allow one lakh for endowment.

MAY.

2nd.—Government of India issued press communique on recommendations of recent War Conference explaining requirements in connection with war and in particular showing that half a million recruits were required for Indian Army.

10th.—Government notified that in order to give practical effects to recommendations of Delhi War Conference they proposed to constitute Transports and Foodstuffs Board, Communications Board, Employment and Labour Board, and Publicity Board, at Headquarters of the Government of India, to coordinate and expedite efforts and secure cooperation of non-official community.

13th.—In appreciation of Lady Willingdon's great services in several matters of public utility and benevolence, and especially in the cause of amelioration and of progress of Indian Womanhood, Maharani of Bhavnagar announced inauguration of scheme for perpetuation of Lady Willingdon's name among Indian States and Durbars, a fund to which initial contributions amounting to Rs. 6 lakhs already been paid being inaugurated for the purpose.

24th.—Government of India issued long resolution indicating manner in which they desired progress to be made along road of local self-government. Resolution recommended in particular substantial increase of elected members in Municipalities and Rural Boards, representation of minorities by nominations and securing of official experience by nomination of officials without power of voting.

JUNE.

3rd.—His Majesty's Birthday Honours list issued in Simla, announced grant of two G.C.S.I. (H. E. Lord Pentland, Madras, and H. E. Lord Willingdon, Bombay), two K.C.S.I., six C.S.I., two G.C.I.E., four K.C.I.E., 42 C.I.E., eight knighthoods, and numerous honours of lesser degree.

Second Indian War Loan, representing part of India's £100 million contribution to British Government for carrying on war, opened, first day's subscriptions amounting to Rs. 4,21,59,000.

10th.—Great Provincial War Conference at Town Hall, Bombay, Governor presiding. War Purposes Board appointed.

13th.—Great Public Meeting in Bombay Town Hall for encouragement of subscriptions to Second Indian War Loan.

H. H. Sir James Meston, H. H. Maharaja of Patiala, and Hon. Sir S. P. Sinha, representing India, cordially welcomed by their colleagues at opening session of Imperial War Cabinet.

19th.—First cases of "Spanish influenza" to occur in India reported in Bombay, disease having arrived in Govt. transport from Suez.

21st.—Government of India announced decision of H. M. King-Emperor to grant number of substantive King's Commissions in Indian Army to selected Indian officers who have specially distinguished themselves in war; also a certain number conferring honorary ranks in Indian Army to certain other Indian officers who have rendered distinguished services and certain further number of temporary substantive King's Commissions in Indian Army to selected candidates nominated partly from Civil life and partly from Army.

22nd.—Issued from Bombay Mint, gold mohurs of value of Rs. 15, these being intended fulfil demand for gold coins in India until newly established branch of Royal Mint for coining sovereigns and half-sovereigns in Bombay comes into operation.

Announced in Simla that Bombay Government authorised under Defence of India Act to constitute Cotton Control Committee for controlling Bombay cotton trade.

28th.—Bombay Government, in resolution reviewing progress of co-operative credit movement in Presidency during 1916-17, showed that remarkable advance was made during that year.

JULY.

4th.—Obituary;—Mahomed V., Sultan of Turkey.

8th.—Report of Indian Constitutional Reform proposals by Viceroy and Secretary of State issued, main provisions being for (1) complete popular control in local bodies and their largest possible independence from outside control; (2) early steps towards progressive realisation of responsible government in Provinces; (3) enlargement of Imperial Legislative Council and increased opportunities of influencing Government; (4) relaxation of control of Parliament and Secretary of State over Government of India and Provincial governments. Distinguished authors of the Report thus summarised their proposals.—"What we have done is to afford Indians a fair share in the government of the entire country, while providing in the provinces the means for them to attain the stage of responsible government, to which the beginning of responsibilty for the Government of India itself must be the sequel."

10th.—Numerous views of non-official Indians published highly favourable to Reforms Report.

19th.—Report published in India of Judicial Committee presided over by Mr. Justice Rowlatt King's Bench, appointed to investigate nature and extent of criminal conspiracies in connection with revolutionary movements in India and to advise in regard to legislation. The report extending to over 150 printed foolscap pages plus annexures, contained amazing story of sedition and conspiracy largely fostered and financed by Germans, with view to causing uprising in India. The Committee made elaborate recommendations for special legislation of both emergency and permanent character.

25th.—Prominent moderate political leaders of Bombay issued important memorandum on Reform Scheme, declaring that it represented "real and substantial measure of reform, but recommending various amendments in details."

29th.—Bombay Legislative Council, Poona.—Revised Budget Statement, 1918-19, presented.—Second reading of Bill to amend Bombay Medical Act, 1912, passed.—Bill to disqualify certain aliens from being members of or voting at elections to certain local bodies in Bombay Presidency, introduced and passed.—Bill further to amend Bombay District Police Act introduced and referred to Select Committee.

30th.—Bombay Legislative Council, Poona.—Bombay Rent Bill read first time and referred to Select Committee.—Non-official resolutions.

31st.—Bombay Legislative Council.—Non-official resolutions, most important being one protesting against the Government's exodus to Mahableshwar twice a year, this resolution being defeated by 24 votes to 15 after lengthy discussion.

AUGUST.

1st.—Bombay Legislative Council.—Non-official resolutions.

Numerous prominent representative members of backward classes in Bombay Presidency issued memorandum on Reform Scheme, urging special view-point of backward classes and in particular demanding communal representation for them in new legislatures.

2nd.—Bombay Legislative Council: Non-official resolutions.

4th.—It being Sunday and fourth anniversary of Great Britain's entry into the war, special supplications for victory of Allies were offered in all places of worships throughout India.

10th.—Announced that All-India Conference of Moderate Party would be held in near future for purpose of expressing acceptance and general support of Montagu-Chelmsford Reform Scheme, this announcement following another by Mrs. Besant and her followers summoning Special Session of Indian National Congress and being followed by similar memorandum by Moderates of Bengal headed by Hon. Mr. Surendranath Banerjee.

25th.—Government of India announced appointment of Cotton Cloth Controller to deal with problem of high prices of cotton cloth throughout India.

29th.—Special Session of Indian National Congress opened in Bombay under presidency of Mr. Hasan Imam, who delivered highly critical address on reform proposals.

30th-31st.—National Congress in Bombay passed various resolutions criticising Montagu-Chelmsford reform proposals.

31st.—Extraordinary Session of All-India Moslem League in Bombay under presidency of Raja of Mahmudabad, who delivered address generally critical of Reform proposals.

SEPTEMBER.

1st.—Moslem League Session continued in Bombay. First resolution passed declared most loyal homage of All-India Moslem League to H. M. King Emperor and others criticised Reform Scheme.

4th.—Imperial Legislative Council, Simla.—Viceroy delivered long introductory speech.—Finance Minister introduced Provincial Collection of Taxes Bill, Paper Currency Bill and Gold Mohur Bill.—Hon. Sir George Barnes introduced Non-Ferrous Metals Bill, Provincial Insolvency Bill and Bill to take Powers to Provide for Cheap Supply of Cotton Cloth for Poorer Classes.

5th.—Imperial Legislative Council.—Hon. Sir George Barnes introduced Enemy Trading Orders (Validation) Bill.—Hon. Mr. Patel introduced Hindu Inter-caste Marriage Bill.

6th.—Imperial Legislative Council.—Hon. Mr. Surendranath Banerjee moved resolution thanking Viceroy and Secretary of State for reform proposals and recommending them as genuine effort and definite advance towards progressive realisation of responsible self-government for India, and recommending appointment of Committee to consider reform report and make recommendations. Discussion continued all day.

7th.—Imperial Legislative Council.—Discussion resumed on Reforms resolution, which was divided into two parts. On divisions being taken first part was carried by 46 votes against two, and second part by 48 votes against 2.

Obituary :—Sir Ratan Tata, Kt., of Bombay.

9th.—Imperial Legislative Council.—Hon. Sir W. Meyer moved, "that this Council recognises that the prolongation of the war justifies India's taking a larger share than she does at present in respect of the cost of the military forces raised or to be raised in this country." He outlined financial programme to meet special measures just taken in India in connection with further continuance of war and showed that further money contribution of £45 millions by India to cost of war would involve new taxation which was to take form of Excess Profit Tax next year. Debate continued all day.

10th.—Imperial Legislative Council.—After further lengthy debate Finance Member's motion regarding additional financial contribution to cost of war was adopted subject to slight amendment.

11th.—Imperial Legislative Council.—Indian Paper Currency Act Amendment Bill, Gold Coinage Act Amendment Bill, and Enemy Trading Orders (Validating) Bill passed.—Bill to amend Indian Army (Suspension of Sentences, Act of 1917 and Bill to amend I. D. F. Act of 1917, and Indian Companies (Foreign Trades) Bill introduced.—Cotton Cloth Bill referred to Select Committee, Non-official resolutions.

16th.—Text of Memorandum by Sir Narayen Chandavarkar Kt., ex-Judge of Bombay High Court, and Mr. Justice B. C. Beachcroft, Calcutta High Court, regarding interuments under Defence of India Act of Government of Bengal issued, showing that of 806 cases examined by the Commissioners, they had in only six cases found that there were in their opinion insufficient grounds for believing that parties concerned had acted in manner prejudicial to public safety on the defence of British India.

18th.—Imperial Legislative Council, Simla.—Provisional Collection of Taxes Bill, Non-Ferrous Metals and Metallic Ores Bill and Indian Armies' (Suspension of Sentences) Bill passed.—The I. D. F. Act Amendment Bill and Bronze Coin Bill introduced.

19th.—Imperial Legislative Council.—Non-official resolutions.

20th.—"India Day" in London, object being to raise £50,000 to provide huts and clubs for Indian Troops "as a small token of the City's appreciation of the magnificent loyalty of India and the splendid fighting qualities of her sons, of whom Londoners have every right to be proud and grateful."

22nd.—Bombay Legislative Council.—Government explained measures taken to meet shortage of food grains resulting from failure of monsoon. The Hon. Mr. Purshotamdass Thakurdas moved a resolution recommending Government of Bombay to urge Imperial Government to take or authorise special measures to meet emergency caused by failure of rains, and after considerable and favourable debate resolution was unanimously carried.—Bills further to amend Bombay District Police Act, and City of Bombay Municipal Act, passed.

23rd.—Imperial Legislative Council.—Non-official resolutions.

24th.—Bombay Legislative Council.—Rent Bill discussed.

Imperial Legislative Council, Simla.—Non-official resolutions.

25th.—Bombay Legislative Council.—Rent Bill passed.—Non-official resolutions.

Imperial Legislative Council.—Resolution moved by Hon. Mr. Shafi to convey thanks and congratulations of Council to Allied Armies for their recent victories on Western Front, warmly supported and carried amidst cheers, all Members rising.

26th.—Imperial Legislative Council.—Indian Companies' (Foreign Interest) Bill, Indian Defence Force (Foreign Service) Bill, Bronze Coins' (Legal Tender) Bill and Industrial Compulsion Bill passed.—Commander-in-Chief introduced Industrial Compulsion Bill, a measure giving Government power to enforce services of experts in various industries for use in munition-making.

27th.—Despatch from Lieut.-General Sir W. Marshall, Commanding in Mesopotamia, reviewing operations on that front from 1st October 1917 till 31st March 1918, published in Simla.

OCTOBER.

7th.—Public Holiday throughout India for celebration of recent victories of Allied Armies in particular defeat of flower of Turkish Armies in Palestine with loss of 92,000 prisoners and all their artillery, the breaking in of the Bulgarian Front in Macedonia and subsequent unconditional surrender of Bulgaria, and the succession of victories on Western Front, with capture of 259,450 German prisoners and 3,700 German guns.

31st.—Deaths caused by influenza in Bombay during September and October when epidemic reached its highest limit, reached total of approximately fifteen thousand. Epidemic by now spread throughout India.

NOVEMBER.

1st.—All-India Moderates' Conference in Bombay. Hon. Sir D. E. Wacha delivered address as Chairman of Reception Committee and Hon. Mr. Surendranath Banerjee delivered Presidential address, to the speakers giving Reform Scheme warm support, subject to criticism of details. Conference continued two days.

7th.—Bombay Legislative Council.—Resolution moved by Hon. Mr. P. A. Desai recommending Government to take early steps to amend City of Bombay Municipal Act so as to enable women to become Members of Corporation, carried by 18 to 12.—Non-official resolutions.

8th.—Bombay Legislative Council.—Non-official resolutions.

9th.—William II, Emperor of Germany, signed letter of abdication at German Headquarters.

11th.—German Delegates at Field-Marshal Foch's Headquarters in France signed Armistice on conditions dictated by Allied Commanders, and amounting to unconditional surrender. Hostilities ceased.

23rd.—Cricket match in Bombay between England team captained by H. E. Lord Willingdon and all India team captained by H. H. the Maharajah of Patiala, in aid of Bombay Presidency Famine Relief Fund, ended in a draw.

The main provisions of the proposed Excess Profit Tax were published.

Various entertainments in celebration of signing of the Armistice were held in Bombay, including dinners to sailors and soldiers and entertainment to men on the Oval.

27th.—The Armistice was celebrated throughout India. In Bombay a naval and military procession passed through the main roads of the City, amid enthusiastic acclamations.

28th.—H. E. the Viceroy invested the Maharajah of Bharatpur with the powers of a Ruling Chief.

29th.—H. E. the Governor of Bombay presided over a public meeting at which resolutions were passed for taking measures to relieve distress caused by the failure of rains in the Presidency.

DECEMBER.

1st.—The Reforms Committee returned to Delhi after visiting Patna and Lucknow, where they considered the proposals relating to Behar and Orissa and the United Provinces.

2nd.—The Indian Railway Conference assembled at Delhi.

The first batch of returned Kut prisoners of war arrived in Bombay.

4th.—The Jodhpur Council of Regency was opened.

5th.—Lady Willingdon received a farewell presentation from the ladies of the Bombay Presidency.

7th.—Lord Willingdon opened a sanitorium for the treatment of persons suffering from tuberculosis, at Parel, Bombay.

Their Excellencies the Governor of Bombay and Lady Willingdon held a farewell reception at Government House, Bombay, at which over 2,600 people were present.

9th.—The Bombay Legislative Council met at the Secretariat, Bombay, H. E. Lord Willingdon presiding. A resolution requesting His Excellency to convey the loyal congratulations of the Council to His Majesty on the complete success of the Empire and the Allies on the victorious close of the War was carried amid cheers. A Bill to provide for the control of dealings in cotton passed the second and third readings.

10th.—At resumed sitting of Bombay Legislative Council resolution was passed expressive of its appreciation of the services rendered to the Presidency by H. E. Lord Willingdon, after which His Excellency the Governor gave an account of his stewardship.

First aeroplane to fly from Cairo to Delhi arrived at Karachi with five passengers, including Major-General Salmond, Commanding the Air Force in the Middle East, Brigadier-General A. E. Barton, Commanding the Palestine Brigade, and Captain Ross Smith of Australian Flying Corps

11th.—Public meeting was held at Bombay Town Hall to express appreciation of services of Lord and Lady Willingdon. At night Their Excellencies were entertained at farewell banquet by Ruling Princes and Chiefs in the University Hall.

12th.—The Bombay Engineering Congress opened in Bombay. Mr. F. J. Preston presided, and about 100 members were present, from all parts of the Presidency.

Sir Cowasji Jehangir, Baronet, was appointed Sheriff of Bombay.

16th.—Sir George Ambrose Lloyd, Governor Designate of Bombay, and Lady Lloyd landed at Bombay, the Municipality presenting an address of welcome at the Apollo Bunder. After handing over charge of his office Lord Willingdon, the retiring Governor, accompanied by Lady Willingdon, left Bombay in the afternoon for England. Lord Willingdon was presented with an address by the Municipality before leaving the Apollo Bunder.

His Excellency the Viceroy as Chancellor delivered his convocation address at the Calcutta University.

18th.—The Bombay Chamber of Commerce and the Indian Merchants' Chamber and Bureau presented addresses of Welcome to H. E. Sir George Lloyd, Governor of Bombay. Sir James Meston, Finance Minister, met the members of the Indian Merchants' Chamber and Bureau, Bombay, and discussed the Excess Profits Tax, representation of the Indian Commercial Community at the Peace Conference and other subjects.

19th.—A Conference of Sanitary and Bacteriological Experts was opened at Delhi.

26th.—The 33rd Session of the Indian National Congress opened at Delhi. The Hon. Pandit Madan Mohan Malaviya presided.

27th.—All Indian Mahomedan Educational Conference opened at Surat. The Hon. Sir Ibrahim Rahimtulla presided.

INTEREST TABLE.

From 5 to 12 per cent. on Rupees 100.

Calculated for 1 *Year*, 1 *Month* (*Calendar*), 1 *Week, and* 1 *Day* (365 *Days to Year*), *the Decimal Fraction of a Pie for the Day being shown for the Day.*

Per cent.	1 *Day.*	1 *Week.*	1 *Month.*	1 *Year.*
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
5	0 0 2·630	0 1 6	0 6 8	5 0 0
6	0 0 3·156	0 1 10	0 8 0	6 0 0
7	0 0 3·682	0 2 1	0 9 4	7 0 0
8	0 0 4·208	0 2 5	0 10 8	8 0 0
9	0 0 4·734	0 2 9	0 12 0	9 0 0
10	0 0 5·260	0 3 0	0 13 4	10 0 0
11	0 0 5·786	0 3 4	0 14 8	11 0 0
12	0 0 6·312	0 3 8	1 0 0	12 0 0

Table of Exchange, No. 1—Rupees into Pounds Sterling.

For values of Rupees from 1*s.* $3\frac{1}{2}$*d. to* 1*s.* $3\frac{13}{16}$*d.*

Rupees.	1s. $3\frac{1}{2}$d.	1s. $3\frac{5}{16}$d.	1s. $3\frac{5}{8}$d.	1s. $3\frac{11}{16}$d.	1s. $3\frac{3}{4}$d.	1s. $3\frac{13}{16}$d.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	0 1 $3\frac{1}{2}$	0 1 $3\frac{5}{8}$	0 1 $3\frac{1}{2}$	0 1 $3\frac{5}{8}$	0 1 $3\frac{3}{4}$	0 1 $3\frac{3}{4}$
3	0 3 $10\frac{1}{2}$	0 3 $10\frac{5}{8}$	0 3 $10\frac{3}{4}$	0 3 11	0 3 $11\frac{1}{4}$	0 3 $11\frac{1}{4}$
5	0 6 $5\frac{1}{2}$	0 6 $5\frac{3}{4}$	0 6 6	0 6 $6\frac{1}{4}$	0 6 $6\frac{3}{4}$	0 6 7
10	0 12 11	0 12 $11\frac{1}{2}$	0 13 $0\frac{1}{4}$	0 13 $0\frac{3}{4}$	0 13 $1\frac{1}{2}$	0 13 2
20	1 5 10	1 5 $11\frac{1}{2}$	1 6 $0\frac{1}{2}$	1 6 $1\frac{1}{4}$	1 6 3	1 6 $4\frac{1}{4}$
30	1 18 9	1 18 $10\frac{1}{2}$	1 19 $0\frac{1}{2}$	1 19 $2\frac{1}{2}$	1 19 $4\frac{1}{2}$	1 19 $6\frac{1}{4}$
40	2 11 8	2 11 $10\frac{1}{2}$	2 12 1	2 12 $3\frac{1}{2}$	2 12 6	2 12 $8\frac{1}{2}$
50	3 4 7	3 4 10	3 5 $1\frac{1}{2}$	3 5 $4\frac{1}{2}$	3 5 $7\frac{1}{2}$	3 5 $10\frac{1}{2}$
60	3 17 6	3 17 $9\frac{1}{2}$	3 18 $1\frac{1}{2}$	3 18 $5\frac{1}{2}$	3 18 9	3 19 $0\frac{1}{2}$
70	4 10 5	4 10 $9\frac{1}{2}$	4 11 $1\frac{1}{2}$	4 11 6	4 11 $10\frac{1}{2}$	4 12 $2\frac{1}{2}$
80	5 3 4	5 3 9	5 4 2	5 4 7	5 5 0	5 5 5
90	5 16 3	5 16 $8\frac{1}{2}$	5 17 $2\frac{1}{2}$	5 17 $7\frac{1}{2}$	5 18 $1\frac{1}{2}$	5 18 7
100	6 9 2	6 9 $8\frac{1}{2}$	6 10 $2\frac{1}{2}$	6 10 $8\frac{1}{2}$	6 11 3	6 11 $9\frac{1}{2}$
250	16 2 11	16 4 $2\frac{1}{2}$	16 5 $6\frac{1}{4}$	16 6 $9\frac{1}{2}$	16 8 $1\frac{1}{2}$	16 9 5
400	25 16 8	25 18 9	26 0 10	26 2 11	26 5 0	26 7 1
500	32 5 10	32 8 $5\frac{1}{2}$	32 11 $0\frac{1}{2}$	32 13 $7\frac{1}{2}$	32 16 3	32 18 $10\frac{1}{2}$
750	48 8 9	48 12 $7\frac{1}{2}$	48 16 $6\frac{1}{2}$	49 0 $5\frac{1}{2}$	49 4 $4\frac{1}{2}$	49 8 $3\frac{1}{2}$
1,000	64 11 8	64 16 $10\frac{1}{2}$	65 2 1	65 7 $3\frac{1}{2}$	65 12 6	65 17 $8\frac{1}{2}$

For values of Rupees from 1*s.* $3\frac{7}{8}$*d. to* 1*s.* $4\frac{1}{16}$*d.*

Rupees.	1s. $3\frac{7}{8}$d.	1s. $3\frac{15}{16}$d.	1s. $3\frac{31}{32}$d.	1s. 4d.	1s. $4\frac{1}{32}$d.	1s. $4\frac{1}{16}$d.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	0 1 $3\frac{3}{4}$	0 1 $3\frac{3}{4}$	0 1 $3\frac{3}{4}$	0 1 4	0 1 4	0 1 4
3	0 3 $11\frac{1}{4}$	0 3 $11\frac{1}{4}$	0 3 $11\frac{1}{4}$	0 4 0	0 4 0	0 4 0
5	0 6 $7\frac{1}{2}$	0 6 $7\frac{1}{2}$	0 6 $7\frac{3}{4}$	0 6 8	0 6 8	0 6 $8\frac{1}{4}$
10	0 13 $2\frac{3}{4}$	0 13 $3\frac{1}{4}$	0 13 $3\frac{1}{2}$	0 13 4	0 13 $4\frac{1}{4}$	0 13 $4\frac{1}{2}$
20	1 6 $5\frac{1}{2}$	1 6 $6\frac{3}{4}$	1 6 $7\frac{1}{4}$	1 6 8	1 6 $8\frac{1}{4}$	1 6 $9\frac{1}{2}$
30	1 19 $8\frac{1}{4}$	1 19 10	1 19 11	2 0 0	2 0 $0\frac{3}{4}$	2 0 $1\frac{3}{4}$
40	2 12 11	2 13 $1\frac{1}{2}$	2 13 $2\frac{1}{2}$	2 13 4	2 13 $5\frac{1}{2}$	2 12 $6\frac{1}{4}$
50	3 6 $1\frac{3}{4}$	3 6 $4\frac{3}{4}$	3 6 $6\frac{1}{2}$	3 6 8	3 6 $9\frac{1}{2}$	3 6 11
60	3 19 $4\frac{1}{2}$	3 19 $8\frac{1}{4}$	3 19 10	4 0 0	4 0 $1\frac{3}{4}$	4 0 $3\frac{3}{4}$
70	4 12 $7\frac{1}{4}$	4 12 $11\frac{1}{2}$	4 13 $1\frac{3}{4}$	4 13 4	4 13 6	4 13 $8\frac{1}{4}$
80	5 5 10	5 6 3	5 6 $5\frac{1}{2}$	5 6 8	5 6 $10\frac{1}{4}$	5 7 1
90	5 19 $0\frac{3}{4}$	5 19 $6\frac{1}{2}$	5 19 9	6 0 0	6 0 $2\frac{3}{4}$	6 0 $5\frac{1}{2}$
100	6 12 $3\frac{1}{2}$	6 12 $9\frac{1}{4}$	6 13 $0\frac{3}{4}$	6 13 4	6 13 7	6 13 $10\frac{1}{4}$
250	16 10 $8\frac{1}{4}$	16 12 $0\frac{1}{4}$	16 12 8	16 13 4	16 13 $11\frac{3}{4}$	16 14 $7\frac{1}{2}$
400	26 9 2	26 11 3	26 12 $3\frac{1}{4}$	26 13 4	26 14 $4\frac{3}{4}$	26 15 5
500	33 1 $5\frac{1}{2}$	33 4 $0\frac{3}{4}$	33 5 $4\frac{1}{2}$	33 6 8	33 7 $11\frac{1}{2}$	33 9 $3\frac{1}{2}$
750	49 12 $2\frac{1}{2}$	49 16 1	49 18 $0\frac{1}{4}$	50 0 0	50 1 $11\frac{1}{4}$	50 3 $10\frac{3}{4}$
1,000	66 2 11	66 8 $1\frac{1}{2}$	66 10 $8\frac{3}{4}$	66 13 4	66 15 $11\frac{1}{4}$	66 18 $6\frac{1}{2}$

For values of Rupees from 1*s.* $4\frac{3}{32}$*d. to* 1*s.* $4\frac{1}{4}$*d.*

Rupees.	1s. $4\frac{3}{32}$d.	1s. $4\frac{1}{8}$d.	1s. $4\frac{5}{32}$d.	1s. $4\frac{3}{16}$d.	1s. $4\frac{7}{32}$d.	1s. $4\frac{1}{4}$d.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	0 1 4	0 1 4	0 1 4	0 1 4	0 1 4	0 1 $4\frac{1}{4}$
3	0 4 $0\frac{1}{4}$	0 4 $0\frac{1}{4}$	0 4 $0\frac{1}{4}$	0 4 $0\frac{1}{4}$	0 4 $0\frac{1}{4}$	0 4 $0\frac{1}{2}$
5	0 6 $8\frac{1}{4}$	0 6 $8\frac{1}{2}$	0 6 $8\frac{1}{2}$	0 6 $8\frac{1}{2}$	0 6 9	0 6 $9\frac{1}{2}$
10	0 13 $4\frac{1}{2}$	0 13 $5\frac{1}{4}$	0 13 $5\frac{1}{2}$	0 13 $5\frac{1}{2}$	0 13 6	0 13 $6\frac{1}{2}$
20	1 6 $9\frac{1}{2}$	1 6 $10\frac{1}{2}$	1 6 11	1 6 $11\frac{1}{2}$	1 7 $0\frac{1}{2}$	1 7 1
30	2 0 $2\frac{1}{4}$	2 0 $3\frac{1}{4}$	2 0 $4\frac{1}{2}$	2 0 $5\frac{1}{2}$	2 0 $6\frac{1}{2}$	2 0 $7\frac{1}{2}$
40	2 13 7	2 13 9	2 13 $10\frac{1}{4}$	2 13 $11\frac{1}{2}$	2 14 $0\frac{1}{2}$	2 14 2
50	3 7 $0\frac{1}{2}$	3 7 $2\frac{1}{4}$	3 7 $3\frac{1}{2}$	3 7 $5\frac{1}{2}$	3 7 $6\frac{1}{2}$	3 7 $8\frac{1}{4}$
60	4 0 $5\frac{1}{2}$	4 0 $7\frac{1}{4}$	4 0 $9\frac{1}{4}$	4 0 $11\frac{1}{2}$	4 1 1	4 1 3
70	4 13 $10\frac{1}{2}$	4 14 $0\frac{1}{4}$	4 14 $2\frac{1}{2}$	4 14 5	4 14 $7\frac{1}{2}$	4 14 $9\frac{1}{2}$
80	5 7 $3\frac{1}{2}$	5 7 6	5 7 $8\frac{1}{2}$	5 7 11	5 8 $1\frac{1}{2}$	5 8 4
90	6 0 $8\frac{1}{2}$	6 0 $11\frac{1}{2}$	6 1 $2\frac{1}{2}$	6 1 $4\frac{3}{4}$	6 1 $7\frac{1}{2}$	6 1 $10\frac{1}{2}$
100	6 14 $1\frac{1}{2}$	6 14 $4\frac{1}{2}$	6 14 $7\frac{1}{2}$	6 14 $10\frac{3}{4}$	6 15 $1\frac{3}{4}$	6 15 5
250	16 15 $3\frac{1}{4}$	16 15 $11\frac{1}{4}$	16 16 7	16 17 $2\frac{3}{4}$	16 17 $10\frac{1}{4}$	16 18 6
400	26 16 $5\frac{1}{2}$	26 17 6	26 18 $6\frac{1}{2}$	26 19 7	27 0 $7\frac{1}{2}$	27 1 8
500	33 10 $6\frac{3}{4}$	33 11 $10\frac{1}{4}$	33 13 2	33 14 $5\frac{1}{2}$	33 15 $9\frac{1}{4}$	33 17 1
750	50 5 10	50 7 $9\frac{1}{4}$	50 9 9	50 11 $8\frac{1}{4}$	50 13 $7\frac{3}{4}$	50 15 $7\frac{1}{4}$
1,000	67 1 $1\frac{1}{2}$	67 3 9	67 6 $4\frac{1}{2}$	67 8 $11\frac{1}{2}$	67 11 $6\frac{1}{2}$	67 14 2

Table of Exchange, No. 2—Pounds Sterling into Rupees.

For values of Rupees from 1s. 3½d. *to* 1s. 3$\frac{15}{16}$d.

Sterling.	at 1s. 3½d.	at 1s. 3$\frac{3}{16}$d.	at 1s. 3⅜d.	at 1s. 3$\frac{7}{16}$d.	at 1s. 3$\frac{1}{2}$d.	at 1s. 3$\frac{9}{16}$d.	at 1s. 3$\frac{5}{8}$d.	at 1s. 3$\frac{11}{16}$d.
£ s. d.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
0 0 1	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0
0 0 4	0 4 1	0 4 1	0 4 1	0 4 1	0 4 0	0 4 0	0 4 0	0 4 0
0 0 6	0 6 2	0 6 2	0 6 2	0 6 1	0 6 1	0 6 1	0 6 1	0 6 0
0 0 9	0 9 3	0 9 3	0 9 2	0 9 2	0 9 2	0 9 1	0 9 1	0 9 1
0 1 0	0 12 4	0 12 4	0 12 3	0 12 3	0 12 2	0 12 2	0 12 2	0 12 1
0 2 6	1 14 11	1 14 10	1 14 7	1 14 6	1 14 6	1 14 5	1 14 5	1 14 3
0 5 0	3 13 11	3 13 8	3 13 5	3 13 2	3 13 2	3 12 11	3 12 8	3 12 8
0 7 6	5 12 10	5 12 6	5 12 1	5 11 9	5 11 5	5 11 5	5 10 11	5 10 11
0 10 0	7 11 10	7 11 4	7 10 10	7 10 4	7 10 4	7 9 10	7 9 5	7 9 5
1 0 0	15 7 8	15 6 8	15 5 9	15 4 9	15 4 9	15 3 9	15 2 10	15 2 10
5 0 0	77 6 8	77 1 8	76 12 9	76 7 10	76 7 10	76 3 0	75 14 0	75 14 0
10 0 0	154 13 5	154 3 5	153 9 7	153 4 7	152 15 9	152 6 1	151 12 5	151 12 5
25 0 0	387 1 6	385 8 7	383 15 11	382 7 5	380 15 2	379 7 1	378 14 9	379 7 1
30 0 0	464 8 3	462 10 4	460 12 9	458 15 5	457 2 3	455 5 4	454 8 6	455 5 4
50 0 0	774 3 1	771 1 4	768 0 0	764 15 0	761 14 5	758 14 6	757 1 10	758 14 6
75 0 0	1,161 4 7	1,156 9 11	1,151 15 11	1,147 6 5	1,142 13 8	1,138 5 4	1,135 2 3	1,138 5 4
100 0 0	1,548 6 2	1,542 2 8	1,536 0 0	1,529 14 1	1,523 12 11	1,517 12 7	1,513 3 4	1,517 12 7

For values of Rupees from 1s. 3$\frac{13}{16}$d. *to* 1s. 4$\frac{1}{16}$d.

Sterling.	at 1s. 3$\frac{13}{16}$d.	at 1s. 3$\frac{15}{16}$d.	at 1s. 3$\frac{15}{16}$d.	at 1s. 4d.	at 1s. 4$\frac{1}{16}$d.	at 1s. 4$\frac{1}{16}$d.
£ s. d.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
0 0 1	0 1 0	1 0 0	0 1 0	0 0 11	0 0 11	0 0 11
0 0 4	0 4 0	0 4 0	0 4 0	0 3 11	0 3 11	0 3 11
0 0 6	0 6 0	0 6 0	0 6 0	0 5 11	0 5 11	0 5 11
0 0 9	0 9 0	0 9 0	0 9 0	0 8 11	0 8 11	0 8 11
0 1 0	0 12 0	0 12 0	0 12 0	0 11 11	0 11 11	0 11 11
0 2 6	1 14 1	1 14 1	1 14 0	1 13 10	1 13 10	1 13 9
0 5 0	3 12 5	3 12 2	3 12 1	3 12 0	3 11 10	3 11 9
0 7 6	5 10 7	5 10 3	5 10 1	5 10 0	5 9 9	5 9 7
0 10 0	7 8 11	7 8 5	7 8 2	7 8 0	7 7 9	7 7 6
1 0 0	15 1 10	15 0 11	15 0 5	15 0 0	14 15 6	14 15 0
5 0 0	75 9 5	75 4 8	75 2 4	75 0 0	74 13 7	74 11 3
10 0 0	15 2 10	150 9 4	150 4 8	150 0 0	149 11 3	149 6 7
25 0 0	377 15 2	376 7 5	375 11 8	375 0 0	374 4 2	373 8 6
30 0 0	453 8 8	451 12 2	450 14 1	450 0 0	449 1 11	448 3 11
50 0 0	755 14 5	752 15 0	751 7 5	750 0 0	748 8 7	747 1 3
75 0 0	1,133 13 8	1,129 6 6	1,127 3 2	1,125 0 0	1,122 12 10	1,120 9 10
100 0 0	1,511 12 11	1,505 14 1	1,502 14 11	1,500 0 0	1,497 1 2	1,494 2 7

For values of Rupees from 1s. 4$\frac{3}{32}$d. *to* 1s. 4$\frac{1}{4}$d.

Sterling.	at 1s. 4$\frac{3}{32}$d.	at 1s. 4$\frac{1}{8}$d.	at 1s. 4$\frac{5}{32}$d.	at 1s. 4$\frac{3}{16}$d.	at 1s. 4$\frac{7}{32}$d.	at 1s. 4$\frac{1}{4}$d.
£ s. d.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
0 0 1	0 0 11	0 0 11	0 0 11	0 0 11	0 0 11	0 0 11
0 0 4	0 3 11	0 3 11	0 3 11	0 3 11	0 3 11	0 3 11
0 0 6	0 5 11	0 5 11	0 5 11	0 5 11	0 5 11	0 5 10
0 0 9	0 8 11	0 8 11	0 8 10	0 8 10	0 8 10	0 8 10
0 1 0	0 11 11	0 11 10	0 11 10	0 11 10	0 11 10	0 11 9
0 2 6	1 13 9	1 13 8	1 13 8	1 13 7	1 13 7	1 13 5
0 5 0	3 11 7	3 11 6	3 11 5	3 11 3	3 11 2	3 11 0
0 7 6	5 9 5	5 9 3	5 9 1	5 8 11	5 8 9	5 8 6
0 10 0	7 7 3	7 7 0	7 6 10	7 6 7	7 6 4	7 6 1
1 0 0	14 4 7	14 14 1	14 13 8	14 13 2	14 12 9	14 12 3
5 0 0	74 9 0	74 6 8	74 4 4	74 2 1	73 15 9	73 13 6
10 0 0	149 2 0	148 13 4	148 8 9	148 4 2	147 15 7	147 11 0
25 0 0	372 13 0	372 1 5	371 5 10	370 10 5	369 15 0	369 3 7
30 0 0	447 6 0	446 8 2	445 10 4	444 12 7	443 14 10	443 1 2
50 0 0	745 10 1	744 2 11	742 11 11	741 5 0	739 14 1	738 7 4
75 0 0	1,118 7 1	1,116 4 5	1,114 1 10	1,111 15 5	1,109 13 1	1,107 11 0
100 0 0	1,491 4 2	1,488 5 11	1,485 7 10	1,482 10 0	1,479 12 3	1,476 14 9

Indian Stamp Duties.

	Rs.	a.
Acknowledgment of Debt ex. Rs. 20 ..	0	1
Affidavit or Declaration	1	0
Agreement or Memo. of Agreement,		
(a) If relating to the sale of a bill of exchange	0	2
(b) If relating to sale of a Government security, or share in an incorporated company or other body corporate—Subject to a maximum of Rs. 10, a. 1 for every Rs. 10,000 or part.		
(c) If not otherwise provided for ..	0	8
Appointment in execution of a power ..	15	0
Articles of Association of Company ..	25	0
Articles of Clerkship 250	0	
Award, any decision in writing by an Arbitrator, other than by an Order of the Court. Where the value does not exceed Rs. 1,000, same duty as a Bond.		
In any other case	5	0
Bill of Exchange or Promissory Note payable on demand	0	1
Where payable otherwise than on demand but not more than one year after date or sight—Not exc. Rs. 200, a. 3; exc. Rs. 200, not exc. Rs. 400, a. 6; exc. Rs. 400, not exc. Rs. 600, a. 9; exc. Rs. 600, not exc. Rs. 800, a. 12; exc. Rs. 800, not exc. Rs. 1,000, a. 15; exc. Rs. 1,000, not exc. Rs. 1,200, R. 1 a. 2; exc. Rs. 1,200, not exc. Rs. 1,600, R. 1 a. 8; exc. Rs. 1,600, not exc. Rs. 2,500, Rs. 2, a. 4; exc. Rs. 2,500, not exc. Rs. 5,000, Rs. 4 a. 8; exc. Rs. 5,000, not exc. Rs. 7,500, Rs. 6 a. 12; exc. Rs. 7,500, not exc. Rs. 10,000. Rs. 9; exc. Rs. 10,000, not exc. Rs. 15,000, Rs. 13 a. 8; exc. Rs. 15,000, not exc. Rs. 20,000, Rs. 18; exc. Rs. 20,000, not exc. Rs. 25,000, Rs. 22 a. 8; exc. Rs. 25,000, not exc. Rs. 30,000, Rs. 27; and for every add. Rs. 10,000, or part thereof, in excess of Rs. 30,000, Rs. 9.		
Where payable at more than one year after date or sight, same duty as a Bond.		
	Rs.	a.
Bill of Lading	0	4
Bond (not otherwise provided for)—		
Not exc. Rs. 10..	0	2
Exc. Rs. 10, but not exc. Rs. 50 ..	0	4
Exc. Rs. 50, but not exc. Rs. 100 ..	0	8
Up to Rs. 1,000, every Rs. 100 ..	0	8
For every Rs. 500 or part, beyond Rs. 1,000	2	8
Bond, Administration, Customs, Security or Mortgage Deed—For amount not exceeding Rs. 1,000, same duty as a Bond.		
In any other case..	5	0
Cancellation	5	0
Certificate or other Document relating to Shares	0	1
Charter Party	1	0
Cheque	0	1
Composition—Deed	10	0
Conveyance, not being a Transfer—		
Not exceeding Rs. 50	0	8
Exceeding Rs. 50, not exceeding Rs. 100	1	0
For every Rs. 100 in excess of Rs. 100 up to Rs. 1,000	1	0
For every Rs. 500, or part thereof, in excess of Rs. 1,000..	5	0
Copy or Extract—If the original was not chargeable with duty, or if duty with which it was chargeable does not exceed 1 Rupee..	0	8
In any other case	1	0
Counterpart or Duplicate—If the duty with which the original instrument is chargeable does not exceed one rupee —The same duty as is payable on the original. In any other case	1	0
Delivery Order	0	1
Entry in any High Court of an Advocate or Vakil 500	0	
In the case of an Attorney 250	0	
Instrument—Apprenticeship	5	0
Divorce	1	0
Other than Will, recording an adoption or conferring or purporting to confer Authority to adopt	10	0

Lease—Where rent is fixed and no premium is paid, for less than 1 year, same duty as Bond for whole amount; not more than 3 years, same as Bond for average annual rent reserved; over 3 years, same as Conveyance for consideration equal to amount or value of the average annual rent reserved; for indefinite term, same as Conveyance for a consideration equal to the amount or value of the average annual rent which would be paid or delivered for the first ten years if the lease continued so long; in perpetuity, same as Conveyance for consideration equal to one-fifth of rents paid in respect of first 50 years. Where there is premium and no rent, same as Conveyance for amount of premium; premium with rent, same as Conveyance for amount of premium in addition to the duty which would have been payable on the lease if no fine or premium or advance had been paid or delivered.

	Rs.	a.
Letter—Allotment of Shares	0	1
Credit	0	1
License	10	0
Memo. of Association of Company—If accompanied by Articles of Association	15	0
If not so accompanied	40	0
Notarial Act	1	0
Note or Memo, intimating the purchase or sale—		
(*a*) Of any Goods exceeding in value Rs. 20	0	2
(*b*) Of any Stock or marketable Security exceeding in value Rs. 20—Subject to a maximum of Rs. 10, a. 1 for every Rs. 10,000, or part.		
Note of Protest by a Ship's Master ..	0	8
Partnership—Where the capital does not exceed Rs. 500	2	8
In any other case	10	0
Dissolution of	5	0
Policy of Insurance—		
(1) *Sea*—Where premium does not exceed rate of 2a., or ½ per cent. of amount insured	0	1
In any other case for Rs. 1,500 or part thereof	0	1
(2) *For time*—For every Rs. 1,000 or part insured, not exc. 6 months ..	0	2
Exceeding 6 and not exceeding 12 months	0	4
If drawn in duplicate, for each part:—Half the above rates, for Sea and Time.		
(3) *Fire*—When the sum insured does not exceed Rs. 5,000..	0	8
In any other case	1	0
In respect of each receipt for any payment of a premium on any renewal of an original policy—One half of the duty payable in respect of the original policy in addition to the amount, if any, chargeable under Art. 53 (*Receipt*).		
(4) *Accident and Sickness*—Against Railway accident, valid for a single journey only	0	1
In any other case—for the maximum amount which may become payable in the case of any single accident or sickness where such amount does not exceed Rs. 1,000, and also where amount exc. Rs. 1,000, for every Rs. 1,000 or part	0	2
(5) *Life, or other Insurance, not specifically provided for*—		
For every sum insured not exceeding Rs. 250	0	2
For every sum insured exceeding Rs. 250 but not exceeding Rs. 500	0	4
For every sum of Rs. 1,000 in excess of Rs. 500	0	2
If drawn in duplicate, for each part—		
Half the above rates.		
In case of a re-insurance by one Company with another—¼ of duty payable in respect of the original insurance, but not less than 1 anna, or more than 1 R.		
Power of Attorney—		
For the sole purpose of procuring the registration of one or more documents in relation to a single transaction or for admitting execution of one or more such documents	0	8
When required in suits or proceedings under the Presidency Small Causes Courts Act, 1882	0	8
Authorising 1 person or more to act in a single transaction other than that mentioned above	1	0
Authorising not more than 5 persons to act jointly and severally in more than 1 transaction, or generally ..	5	0
Authorising more than 5 but not more than 10 persons to act	10	0
When given for consideration and authorising the Attorney to sell any immovable property—The same duty as a *Conveyance* for the amount of the consideration.		
In any other case, for each person authorised	1	0
Protest of Bill or Note	1	0
Proxy	0	1
Receipt for value exc. Rs. 20	0	1
Reconveyance of mortgaged property—		
(*a*) If the consideration for which the property was mortgaged does not exceed Rs. 1,000—the same duty as a conveyance for the amount of such consideration as set forth in the Reconveyance.		
(*b*) In any other case	10	0
Release—that is to say, any instrument whereby a person renounces a claim upon another person or against any specified property—		
(*a*) If the amount or value of the claim does not exceed Rs. 1,000—the same duty as a Bond for such amount or value as set forth in the Release.		
(*b*) In any other case	5	0
Respondentia Bond—The same duty as a Bond for the amount of the loan secured.		
Security Bond—(*a*) when the amount secured does not exceed Rs. 1,000—the same duty as a Bond for the amount secured.		

	Rs. a.
(*b*) In any other case	5 0

Settlement—The same duty as a Bond for the sum equal to the amount or value of the property—settled as set forth in such settlement.

Revocation of Settlement.—The same duty as a Bond for a sum equal to the amount or value of the property concerned as set forth in the instrument of revocation but not exceeding ten rupees.

Share-warrant to bearer issued under the Indian Companies Act.—One and a half times the duty payable on a conveyance for a consideration equal to the nominal amount of the shares specified in the warrant.

Shipping Order	0 1
Surrender of Lease—When duty with which lease is chargeable does not exceed Rs. 5 :—The duty with which such Lease is chargeable.	
In any other case	5 0
Transfer of Shares—One-half of the duty payable on a Conveyance for a consideration equal to the value of the share.	

	Rs. a.
Transfer of any Interest secured by a Bond, Mortgage-deed, or Policy of Insurance—If duty on such does not exceed Rs. 5—The duty with which such Bond, &c., is chargeable.	
In any other case	5 0
—Of any property under the Administrator General's Act 1874, Section 31..	10 0
—of any trust property without consideration from one trustee to another trustee or from a trustee to a beneficiary—five rupees or such smaller amount as may be chargeable for transfer of shares.	
Transfer of Lease by way of assignment and not by way of under-lease—The same duty as a conveyance for a consideration equal to the amount of the consideration for the transfer.	
Trust, Declaration of—Same duty as a Bond for a sum equal to the amount or value of the property concerned, but not exceeding	15 0
Revocation of—Ditto, but not exceeding	10 0
Warrant for Goods..	0 4

FOREIGN MONEYS, AND THEIR ENGLISH EQUIVALENTS.

FULL EXCHANGE VALUES.

	£	s.	d.
America—(United States) Eagle ..	2	1	1
Dollar of 100 Cents	0	4	2
Cent	0	0	$0\frac{1}{2}$
Argentine.—Peso	0	3	$11\frac{1}{2}$
Austria—Silver Crown	0	0	10
10 Kreutzers or 20 Hellers ..	0	0	2
Belgium—Gold Ten-Franc Piece ..	0	7	$11\frac{1}{2}$
Silver Five Franc	0	3	$11\frac{1}{2}$
„ Franc	0	0	$9\frac{1}{2}$
Chilian.—Peso	0	1	6
Denmark, Norway and Sweden—Krone 100 Ore—1 Krone.	0	1	$1\frac{1}{2}$
Egypt—£E of 100 Piastres	1	0	$3\frac{3}{4}$
One Piastre .. (about) .	0	0	$2\frac{1}{2}$
France—Gold Twenty-Franc Piece .	0	15	$10\frac{1}{2}$
Silver Five-Franc Piece	0	3	$11\frac{1}{2}$
Franc	0	0	$9\frac{1}{2}$
Germany—(New Coinage).—			
Gold 20-Mark Piece	0	19	7
„ 10 „ „	0	9	$9\frac{1}{2}$
Silver 5 „ „	0	4	$10\frac{3}{4}$
„ 1 „ „	0	0	$11\frac{3}{4}$
„ $\frac{1}{2}$ „ „	0	0	$5\frac{7}{8}$
2 Thaler Pieces	0	5	$10\frac{1}{2}$
1 „ Piece	0	2	$11\frac{1}{4}$
Greece—Twenty-Drachmai Gold Piece	0	15	10
One Drachma (silver)	0	0	$9\frac{1}{2}$
Holland—Ten Florins (Gulden) ..	0	16	8
Florin (Gulden)	0	1	8

	£	s.	d.
India—1 Rupee (varying in value)..	0	1	4
$\frac{1}{2}$ „ „	0	0	8
$\frac{1}{4}$ „ „	0	0	4
Since 1899 the Sovereign has been legal tender at the ratio of 15 rupees to the £ sterling (=1*s.* 4*d.* the rupee).			
Italy—Gold 20-Lire Piece	0	15	10
„ 5 „	0	3	$11\frac{1}{2}$
One Lira (Silver)	0	0	$9\frac{1}{2}$
Japan—Gold 20 Yen Pieces ..	2	0	$11\frac{1}{4}$
Silver 50 Sen Pieces	0	1	$0\frac{9}{32}$
Value in exchange—1 Yen=100 Sen=	2	0	$1\frac{15}{32}$
Peru.—Sol, Silver	0	2	0
Portugal—Gold Milreis	0	4	$5\frac{1}{2}$
Silver Half Milreis	0	2	$2\frac{3}{4}$
100 Reis	0	0	$5\frac{1}{2}$
Russia—Half Imperial	0	15	$9\frac{27}{33}$
Silver Rouble	0	2	$1\frac{16}{33}$
Ten Kopecks	0	0	$1\frac{16}{33}$
Spain—(Gold)—25 Pesetas	0	19	$9\frac{1}{2}$
(Silver)—5 Pesetas	0	3	$11\frac{1}{2}$
2 „	0	1	$6\frac{1}{2}$
1 Pesta	0	0	$9\frac{1}{2}$
The Peseta=100 Centimos. (*Centimes*).			
Switzerland—Gold 20-Franc Piece ..	0	15	$10\frac{1}{2}$
Silver 5-Franc Piece	0	3	$11\frac{1}{2}$
„ Franc	0	0	$9\frac{1}{2}$
Turkey—Gold Medjidié	0	18	$0\frac{1}{2}$
Silver Medjidié	0	3	7
Piastre	0	0	$3\frac{1}{4}$

Bibliography of India.

The general work of reference in one compact volume about India is still the late Sir William W. Hunter's *The Indian Empire: Its Peoples, History and Products* (Smith Elder, 1893, 28/-) which contains within its 800 pp. all the information, excellently arranged and indexed, that the general reader requires about this country. Its historical sections are particularly good giving a rapid and comprehensive bird's-eye-view of the course of Indian history from the advent of the Mahomedans in the eighth century down to nearly the close of the nineteenth century. Its statistics are based on the Census of 1891 and are therefore somewhat out of date. But, with this slight drawback which can be remedied by consulting the latest annual "Statistical Abstract" (see below), it gives in the compass of one volume a comprehensive view, neither too blurred nor too diffuse, of the Indian Empire and its past and present state. A more detailed account of India is to be found in the first four volumes of *The Imperial Gazetteer of India* (Clarendon Press, 1907-08. 6/- each). These volumes, which are introductory to the alphabetical Gazetteer (Vols. V-XXIV), are an expansion of Hunter's one volume work mentioned above; but all the chapters, with the exception of those on the history of British Rule, have been rewritten by expert writers who have been in most cases Indian administrators also. The statistics in these volumes are based on the Census of 1901. The second volume of the *Oxford Survey of the British Empire* (Clarendon Press, 1914, 14/-) is mostly devoted to India and contains an excellent concise account by various well known writers of the Indian Empire as it is to-day. The statistics of this volume are based on the latest Census of 1911. Sir Thomas Holdich's volume on *India* in the "Regions of the World" Series (Clarendon Press, 1904, 7/6) is a compact geographical account by an authoritative writer. The same author's *Gates of India* (Macmillan, 10/-) is a useful historical and geographical work on the North-West Frontier of India. Dr. George Smith's *Student's Manual of the Geography of British India* (Murray, 1882, 7/6) may still be used with profit, though parts of it are obsolete. Sir Thomas Holderness (fourth) edition, 1911, of Sir John Strachey's *India*, originally published in 1888, contains the best, succinct account of Indian administration and progress (Macmillan, 1911, 10/-). The same editor's little book in the Home University Library, *Peoples and Problems of India* (Williams and Norgate, 1912, 1/-) is a useful introduction to the study of present day India. A very good *Atlas of India* is published as Vol. XXVI of the *Imperial Gazetteer* (separately, 15/- Clarendon Press, 1909). It contains 28 general and 18 provincial maps besides 16 plans of Cities, including 3 of Bombay, 2 of Calcutta and 1 of Madras, Delhi, Simla, etc., each. A somewhat older though still excellent atlas is *Constable's Hand Atlas of India* (Constable, 1893, 14/-). It has 60 maps and plans and is accompanied by an index of 86 pp. The companion volume *Hand Gazetteer of India* by Jas. Bartholomew (Constable, 1894, 12/-) is a very concise gazetteer based on the second edition of 1886 of Hunter's *Imperial Gazetteer*. An older and fuller gazetteer, though still having the advantage of being in one compact volume, is Lethbridge and Wollaston's revised abridgment of *Thornton's Gazetteer of India* (W. H. Allen, 1888, 21/-).

Official Publications.—The principal official publications of general interest and utility are the Annual Parliamentary Blue-Book well known as *The Moral and Material Progress and Condition of India* (issued about the middle of the year, Eyre and Spottiswoode, 1/6) and its accompaniment *The Statistical Abstract for British India* (issued towards the close of the year, about 1/6); the report on the Census of 1911 (Vol. I, Calcutta, Rs. 5, Text, Vol. II, Appendix giving tables, etc.); *Statistics of British India* (4 Vol., Calcutta) Administrative, Judicial, &c. annual *Statement of the Trade of British India* with Foreign Countries (Calcutta) and the annual *Review of Trade* (Eyre and Spottiswoode, 2/-); *Financial Statement of the Government of India* (Eyre and Spottiswoode). Every ten years is issued an elaborate review of the period as a Decennial number of the Moral and Material blue-book (noted above), and those by J. S. Cotton (pub. 1885) and by Sir Athelstane Baines (pub. 1894) are specially valuable. A "Memorandum on some of the Results of Indian Administration during the past Fifty Years of British Rule in India" issued in 1909 by the India Office (reprinted at Government Press, Calcutta, 1911, six annas, in a handy octavo) is a valuable summary of the improvements since 1858.

History.—It is still the fashion to call James Mill's *History of British India* (Vols. I-VI up to 1805; continuation by H. H. Wilson, Vols. VII-IX, index Vol. X., last ed. 1858, W. H. Allen) the standard work on the subject, but it is out of date and in parts wrong-headed. No other author of equal ability and repute has treated the subject on a large scale, though Sir W. W. Hunter made the attempt but lived only to write two volumes dealing with the first century of the English in India up to 1700. (History of British India, Vols. I-II, 1899-1900, Longmans, 30/-). A masterly historical sketch of the whole period is to be found in Sir Alfred Lyall's *British Dominion in India*, (Murray, 1894, latest ed. 1907, 5/-) which is specially remarkable for the writer's theory that the British dominion in India grew and expanded on a regular plan foreseen by its founders and was not as is generally supposed the result of a happy chance. Another excellent and interesting sketch is contained in the first part of the *Historical Geography of India* by P. E. Roberts, who had assisted Hunter in the above mentioned work (Clarendon Press, 1916, 6/6). Miss Gabrielle Festings two works, *When Kings Rode to Delhi* (Blackwood, 1912, 7/6) and *Strangers Within the Gates* (Blackwood, 1914, 7/6) give a popular but accurate presentment of the Mughal and British periods. Marshman's *History of India* (3 Vols., Longmans, 1871, 22/6) gives an excellent account, neither too detailed nor too concise, of the whole history and may be recommended as the most readable history of India till the Mutiny. There is an abridgment of Marshaman in one volume (Blackwood, 6/-). Trotter's *History of India*, recently revised and brought up to date by W. H. Hutton (S. P. C. K., 1917, 10/-) is a good and accurate compendium, as also

is Meadows Taylor's *Students' Manual of Indian History* (Longmans, 7/6) which has long been well known for presenting a vast amount of facts in a small compass and in an agreeable style. For the Mahomedan period the standard work is Elphinstone's *History of India* (Murray, 16/-). A much more elaborate work for the same period is Sir Henry Elliot and Jas Dowson's *History of India as told by its own Historians* (8 Vols., 1867-1877, £ 8–8–0) giving translations of the chief Mahomedan historians. For the pre-Mahomedan period Vincent Smith's *Early History of India* (Clarendon Press, 3rd ed., 1914, 14/-) is the latest and best work. Romesh Dutt's *History of Ancient Civilisation in India* (2 Volumes Trubner's Oriental Series, 21/-, 1893) and Mrs. Manning's earlier work *Ancient and Mediæval India* (2 Vols., 1869, 30/-, W. H. Allen) deal mainly with literature rather than history proper though they give a more or less vivid picture, of those early times.

Historical Biography.—The principal characters of Indian history, Hindu, Mahomedan and British such as Asoka, Babar, Akbar, Clive, Warren Hastings, Dalhousie, etc., are individually treated in the well known *Rulers of India* series of historical and biographical monographs (28 Vols., Clarendon Press, 1890-1902, 2/6 each). In the English *Men of Action* series (Macmillan, 2/6 each) there are also volumes on famous Anglo-Indian statesmen, such as Sir Alfred Lyall's *Warren Hastings*, Archibald Forbes' *Havelock*, Sir Richard Temples *Lord Lawrence*, Sir W. Butler's *Charles Napier*. Among biographies of Anglo-Indian worthies may be mentioned as specially interesting and valuable Col. Malleson's *Warren Hastings* (Chapman and Hall, 1894, 16/-), Bosworth Smith's *Lord Lawrence* (2 Vols., Smith Elder, 1883, new ed., Nelson's series, 1/-) Herbert Edwardes and Merivale's *Sir H. Lawrence* (2 Vols., Smith Elder 1872), Sir W. Hunter's *Lord Mayo*(2 Vols., Smith Elder, 1875, 24/-) Sir W. Lee Warner's *Lord Dalhousie* (2 Vols., Macmillan, 1904, 25/-), Sir Alfred Lyall's *Lord Dufferin* (2 Vols., Murray, 1905, new ed., Nelson's series 1/-), Marshman's *Sir H. Havelock* (Longmans, 3/6), Martineau's *Sir Bartle Frere*, (2 Vols., Murray, 1895, 32/-), Mallet's *Earl of Northbrook* (Longmans, 1910, 16/-), Lord Roberts' *Forty-one Years in India* (Macmillan, 1897, new ed. 6/-), Colebrooke's *Mountstuart Elphinstone* (2 Vols,. Murray, 1884, 25/-), Trotter's *John Nicholson* (1897, Murray, 2/6) and *Bayard of India*(Outram) (Blackwood 5/-). Among noteworthy works treating of recent history since 1858 are Lovat Fraser's *India under Lord Curzon and After* (Heinemann, 1911, 16/-), Lady Betty Balfour's *Lord Lytton's Indian Administration* (Longmans' 1899, 18/-), Sir W. Hunter's *Bombay*, 1885–1900, a Study of Indian Administration (Clarendon Press, 1892, 16/-), Col. Hanna's *Second Afghan War* (3 Vols., Constable, 1899–1907, 36/-) *Official History of the Second Afghan War*, (Murray, 1905, 21/-). Sir John Adye *Indian Frontier Policy*, a historical sketch (Macmillan 1897. 6/-) Trotter's *India under Victoria* (2 Vols., W. H. Allen, 1886, 30/-).

For the Indian Mutiny the standard history is Kaye and Malleson's *History of the Indian* Mutiny (new ed. 6 vols. Longmans, 21/-). Sir George Forrest's *History of the Mutiny* (4 vols. 1904–1914, Blackwood, 64/-) gives the chief records in the Indian archives. The best one-volume narratives are Malleson's shorter work, *Indian Mutiny* (in Messrs. Seeley's "Events of Our Own Times" series 5/-) and T. Rice Holmes' History of *The Indian Mutiny* (1883, W. H. Allen, new ed. Macmillan, 12/6).

Constitution and Administration.—The constitution of the Indian Government may be said to be in a flux, as important and far-reaching changes are under discussion and will be carried out with modifications of course in the near future. The contemplated changes have been embodied in the Report on Indian Constitutional Reforms, drawn up by the Secretary of State and the Viceroy (the Montagu-Chelmsford Scheme) and published in a handy octavo (Government Press, Calcutta, July 1918, one rupee). The present books on the Government of India will have to be thoroughly revised when these or other changes take effect. At the head of these books stands Sir Courtenay Ilbert's "*The Government of India* being a Digest of the Statute Law relating thereto with historical introduction and explanatory matter" (Clarendon Press 1st ed. 1898; 2nd edition 1907, 3rd ed. 1915, 14/-; the first edition contains important constitutional documents such as minutes, despatches, charters, etc., covering 130 pp. which have been omitted in the subsequent issues.) The Digest drawn up by Sir C. Ilbert many years ago has been now embodied in the main in the "Government of India Act of 1915", which contains the entire body of law relating to the Government of India and which has been officially issued in octavo form (price 7*d*. Eyre and Spottiswoode). A supplement to Ilbert's third edition gives a comparison between the Digest given in the book and this Act (1916, 8*d*.) The constitutional documents from the Regulating Act of 1773 down to the Consolidating Act of 1915 have been printed in handy form in P. Mukerji's *Indian Constitutional Documents* (1915, Calcutta, Thacker, Spink, Rs. 6); of the second ed. Vol. II, Rs. 3 has been issued in 1918 containing an historical introduction divided into two parts dealing with English political institutions and the present working constitution of India. The important constitutional documents have been also included in A. R. Iyengar's *Indian Constitution* (1909, 2nd enlarged ed. 1913, Loganatham, Madras, Rs. 3) which contains an historical view of the various administrative institutions. The documentary matter extends to nearly 250 pp. Chesney's *Indian Polity* (3rd ed. 1894, Longmans) gives an excellent historical view of the system of administration as it grew up from the early days of the English in India down to the last decade of the nineteenth century; but it is a little out of date at present and will be much more so in the future. Sir William Lee Warner's *The Citizen of India* (1897, Macmillan 2/6) gives in brief outline a very good sketch of Indian administration. H. A. D. Phillips *Our Administration of India* (1888. W. Thacker, London 6/-) gives an account of the Revenue and Collectorate Administration in all departments, and though this is done with special reference to Bengal, it is more widely useful. A Mackenzie's *How India is Governed* (1882, Kegan Paul, 2) is a very brief sketch of the Indian constitution and administration and of England's work in India. For the system of judicial administra-

tion Herbert Cowell's *History and Constitution of the Courts and Legislative Authorities in India* (1872, 2nd ed. 1884 Thacker Spink, Calcutta, Rs. 6) is still useful, for the historical part.

Economics, Famines, etc.—Baden Powell's Land Revenue and Tenure in British India (2nd ed. 1907, revised by Sir T. Holderness, with an appendix added in 1912, 5/-) gives an account of land revenue system in India. Sir W. Hunter's *Annals of Rural Bengal* (1868, new ed. 1897, Smith Elder, 16/-) and his *Orissa* (2 vols. 1872 Smith Elder 32/-) give a good idea of the economic condition of eastern India when it passed under British Rule. J. C. Jack's *The Economic Life of a Bengal District* (1916, Clarendon Press 7/6) is an economic study of the people's life based on the minute data collected from innumerable families for the record of rights of Bengal and is of great value in estimating the resources of the people and the economic results of British rule. Sir Theodore Morison's *Industrial Organisation of an Indian Province* (1906, Murray 10/6) reviews the principal economic facts and shows their relation to the abstract science of economics. The author treats specially of the United Provinces to which his personal observation was mainly confined. Morison's *Economic Transition in* India (1911 Murray) deals with the development of industrial and economic resources of the country. Romesh Dutt's *Economic History of India under Early British Rule* (1902, Kegan Paul, 16) and the same in the *Victorian Age* (1904, Kegan Paul, 1904) are a powerful though one-sided indictment of British economic and land revenue policy. Dutt, who is a staunch champion of the Permanent System of land tenure in vogue in Bengal and of its introduction into other parts of India, in his *Famines and Land Assessments in India* (1899, Kegan Paul, 7/6) on the same lines asserts that famines are due to the land policy of the Government. On Famines the best books are the Reports of the Famine Commissions pub. 1885, 1887, 1898 (Eyre and Spottiwoode). A good narrative of the last great famine of 1899–1900 is to be found in Vaughan Nash's *The Great Famine: its causes* (1900, Longmans, 6/-). On the earlier great Bengal Famine, Sir Bartle Frere's *The Impending Bengal Famine*, and how to prevent future famines in India, (1874, Murray, 5/-) is useful and suggestive. Charles Blair's *Indian Famines* in their historical and financial aspects (1874, Blackwood 5/-) contains good remarks on preventive and mitigating measures. Loveday's *History and Economics of Indian Famines* (, 2/6) is a later book of the same kind. For public works, Railways, etc., Thornton's *Indian Public Works* (1875, Kegan Paul, 5/-) MacGeorge's *Ways and Works in India* (1893, Constable, 14/-), Horace Bell's *Railway Policy in India* (1894, 12/-), Deakin's *Irrigated India* (1893 Spon, 8/6) Buckley's *Irrigation Works of India* (1905 Spon, 42/-) Valentine Ball's *Coal Fields of India* (new edition 1914 Calcutta) Report of the *Irrigation Commission* (1905 Eyre and Spottiwoode).

On **Finance** the work of the Strachey Brothers, Sir John and Sir Richard, *Finances and Public Works of India* (1882, Kegan Paul, 10/6) is valuable as describing the system of Indian Finance by persons who had intimate knowledge and personal experience. Reports of the Indian Currency Committee, 1893 and 1899, and of the Royal Commission on the administration of the expenditure of India, 1900, contain a vast mass of useful material *Indian Currency* (1878, Longmans 2/-) by Dunning Macleod, treats of the means of introducing a Gold Currency in India, and of extending Banking and Paper Currency. H. J. Tozer's *British India and its Trade* (1902) gives a good view of the trade and surveys its growth during the latter half of the nineteenth century. Prof. Lees Smith's *Studies in Indian Economics* (1909, Constable, 3/6) and Jadunath Sarkar's *Economics of British India* (4th ed. 1917, Sarkar and Sons, Calcutta) are good introductions to the subject. The former is a series of lectures delivered by the author for the Bombay Government.

The Protected States.—Malleson's *Native States of India* (1875, W. H. Allen, 18/-), gives an historical sketch of the various states. The author was then connected with the state of Mysore as the guardian of its young ruler. The work of another official who was connected with Mysore as its Resident at the end of his Indian career, Sir W. Lee-Warner, *Protected States of India* (2nd ed. 1910 Macmillan 10/-, 1st ed. 1894 under title "Protected Princes of India") whilst giving what he calls an "Account of India under Home Rule", chiefly discusses the question of the position of these states in relation to the British Government. A Punjab official, Sir Charles Tupper, in his *Our Indian Protectorate* (1893, Longmans, 16/-) similarly treats of the relations between the British Government and its Feudatories, but goes more into the past and has instructive chapters on indigenous home rule under the Mahrattas, the Sikhs, the Mahomedans, etc. This valuable work is now thoroughly out of print, but a good vernacular translation in Gujarati by A. N. Buch (1900 Rajkot) is available. Sir Lepel Griffin's Punjab Chiefs (1865 Trubner) and Rajas of the Punjab (1870, 2nd ed. 1873, Trubner 20/-) give in considerable detail the history of the principal Punjab states like Patiala, Kapurthala, Nabha, etc. Massy prepared a new edition of the former book (1889, Allahabad, Pioneer Press) and completed it by another *Chiefs and Families of Note in the Punjab* (1890, Allahabad, Pioneer Press) and they give short notices of all the ruling chiefs of the Punjab. Aberigh-Mackay who was tutor to the Raja of Ratlam in Central India and Principal of Rajkumar College at Indore, wrote on the *Chiefs of Central India* (1879) and on the *Native Chiefs and their States in 1877* (1878). Both books are noteworthy. Aitchison's *Treaties, Engagements and Sanads* relating to India and the neighbouring countries (3rd ed. 1893, 11 volumes, Calcutta, Government Press, Rs. 34) is the standard collection of all the treaties with the Native Feudatory States. The relations with the Nizam are investigated in H. G. Brigg's *The Nizam* (2 vols. 1861 Quaritch 28/-) and Hastings Fraser's *Our Faithful Ally, the Nizam* (1865, Smith Elder 18/-). The relations with the Gaekwar of Baroda are exhaustively treated in *The Guicowar and his Relations with the British Government* (1863, Education Press, Bombay) by Col. R. Wallace who was Resident at Baroda

For many years Indian time was in a state of chaotic confusion. What was called Madras or Railway time was kept on all the railways; and each great centre of population kept its own local time, which was not based on any common scientific principle and was divorced from the standards of all other countries. It was with a view to remedying this confusion that the Government of India took the matter up in 1904, and addressed to the Local Governments, and through them to all local bodies, a long letter which reviewed the situation and made suggestions for the future. The essential points in this letter are indicated below:

"In India we have already a standard time, which is very generally, though by no means universally, recognised. It is the Madras local time, which is kept on all railway and telegraph lines throughout India and which is 5h. 21m. 10s. in advance of Greenwich. Similarly, Rangoon local time is used upon the railways and telegraphs of Burma, and is 6h. 24m. 47s. ahead of Greenwich. But neither of these standards bears a simple and easily remembered relation to Greenwich time.

"The Government of India have several times been addressed by Scientific Societies, both in India and in England, and urged to fall into line with the rest of the civilised world. And now the Royal Society has once more returned to the attack. The Committee of that Society which advises the Government of India upon matters connected with its observatories, writes:—'The Committee think that a change from Madras time to that corresponding to a longitude exactly 5½ hours east of Greenwich would be an improvement upon the existing arrangements; but that for international scientific purposes the hourly zone system, making the time 5 hours in advance of Greenwich in the west, and 6 hours in advance in the east of India, would be preferable.'

"Now if India were connected with Europe by a continuous series of civilised nations with their continuous railway systems all of which had adopted the European hour-zone system, it would be imperative upon India to conform and to adopt the second suggestion. But as she is not, and as she is as much isolated by uncivilised States as Cape Colony is by the ocean, it is open to her to follow the example of that and some other similarly situated colonies and to adopt the first suggestion.

"It is believed that this will be the better solution. There are obvious objections to drawing an arbitrary line right across the richest and most populous portions of India, and so as to bisect all the main lines of communication, and keeping times differing by an hour on opposite sides of that line. India has become accustomed to a uniform standard in the Madras time of the railways; and the substitution for it of a double standard would appear to be a retrograde step; while it would, in all probability, be strongly opposed by the railway authorities. Moreover, it is very desirable that whatever system is adopted should be followed by all Europeans and Indians alike; and it is certain that the double standard would puzzle the latter greatly; while by emphasising the fact that railway differed from local time, it might postpone or even altogether prevent the acceptance of the former instead of the latter by people generally over a large part of India. The one great advantage which the second possesses over the first alternative is, that under the former, the difference between local and standard time can never exceed half an hour; whereas under the latter it will even exceed an hour in the extreme cases of Karachi and Quetta. But this inconvenience is believed to be smaller than that of keeping two different times on the Indian system of railways and telegraphs.

"It is proposed, therefore, to put on all the railway and telegraph clocks in India by 8m. 50s. They would then represent a time 5½ hours faster than that of Greenwich, which would be known as **Indian Standard Time**: and the difference between standard and local time at the places mentioned below would be approximately as follows, the figures representing minutes, and F. and S. meaning that the standard time is in advance of or behind local time respectively:—Dibrugarh 51 S., Shillong 38 S., Calcutta 24 S., Allahabad 2 F., Madras 9 F., Lahore 33 F., Bombay 39 F., Peshawar 44 F., Karachi 62 F., Quetta 62 F.

"This standard time would be as much as 54 and 55 minutes behind local time at Mandalay and Rangoon, respectively; and since the railway system of Burma is not connected with that of India, and already keeps a time of its own, namely, Rangoon local time, it is not suggested that Indian Standard Time should be adopted in Burma. It is proposed, however, that instead of using Rangoon Standard Time as at present, which is 6h. 24m. 47s. in advance of Greenwich, a Burma Standard Time should be adopted on all the Burmese railways and telegraphs, which would be one hour in advance of Indian Standard Time, or 6½ hours ahead of Greenwich time, and would correspond with 97° 30′ E. longitude. The change would bring Burma time into simple relation, both with European and with Indian time, and would (among other things) simplify telegraphic communication with other countries.

"Standard time will thus have been fixed for railways and telegraphs for the whole of the Indian Empire. Its general adoption for all purposes, while eminently advisable, is a matter which must be left to the local community in each case."

It is difficult to recall, without a sense of bewilderment, the reception of this proposal by various local bodies. To read now the fears that were entertained if Standard Time was adopted is a study in the possibilities of human error. The Government scheme left local bodies to decide whether or not they would adopt it. Calcutta decided to retain its own local time, and to-day Calcutta time is still twenty-four minutes in advance of Standard Time. In Bombay the first reception of the proposal was hostile; but on reconsideration the Chamber of Commerce decided in favour of it and so did the Municipality. Subsequently the opposing element in the Municipality brought in a side resolution, by which the Municipal clocks were put at Bombay time which is thirty-nine minutes behind Standard Time. On the 1st January 1906 all the railway and telegraph clocks in India were put at Indian Standard Time; in Burma the Burma Standard Time became universal. Calcutta retains its former Calcutta time; but in Bombay local time is retained only in the clocks which are maintained by the Municipality and in the establishments of some orthodox Hindus. Elsewhere Standard Time is universal.

Who's Who in India.

AFSUR-UL-MULK, Afsu-ud-Dowla, Afsur Jung, Mirza Mahomed Ali Beg, Khan Bahadur, Nawab, Lieut.-Coll.: K.C.I.E. (1908); C.I.E. (1897); M.V.O.; Hon. A.D.C. to Nizam of Hyderabad; Commander, the Nizam's Regular Force, 1916; *b.* Aurangabad (Deccan); *o.s.* of late Mirza Vilayet Ali Beg. *Educ.:* Aurangabad. Ressaldar. Hyderabad Contingent; Commander, Golconda Brigade, since 1885; Hyderabad Imperial Service Troops, since 1893; (both of these he raised); Commander, Regular Troops, since 1897. Served in the Afghan War, 1879-1880; Black Mountain Expedition, 1888; China Expedition, 1900; received title of Khan Bahadur and Afsur Jung, 1884; and of Afsur Dowla, 1895; raised to Afsur-ul-Mulk, 1903. Hon. Col., 20th Deccan Horse; on Staff, Imperial Service Cavalry Brigade, Indian Expeditionary Force, Egypt, 1915; on Staff, Indian Cavalry Corps and A.D.C. to Sir John French, France, 1915-16. *Address:* Rahut Munzil, Hyderabad (Deccan).

AGA KHAN, Aga Sultan Mahomed Shah, G.C.I.E. (1902); G.C.S.I. (1911); K.C.I.E. (1898); LL.D., Hon. Camb; *b.* 1875; Brilliant Star of Zanzibar, 1900, 1st Class; has many religious followers in East Africa, Central Asia and India; head of Ismaili Mahomedans; granted rank and status of first class chief with salute of 11 guns in recognition of loyal services during European War. *Address:* Aga Hall, Bombay.

ALWAR, H. H. Raj Rajendra Sri Sewai Maharaja, Lt.-Col. Sir Jeisinghji Veerendra Deo, K.C.I.E. (1911); K.C.S.I., Maharaja of; Hon. Lt.-Col. in army, 1915; *b.* 1882; *S.* father, 1892. *Address:* The Palace, Alwar, Rajputana.

ANDERSON, Lt.-General Sir Charles Alexander, K.C.B. (1915); C.B. (1904); late R.H.A.: Commanding Southern Command, India, since 1917; *b.* 10 Feb. 1857; *s.* of late Surg.-Major R.C. Anderson; *m.* 1893, Ellen Katherine, *y. d.* of George Bevan Russell, M.D. Entered army, 1876; served with Jowaki-Afridi Expedition, 1877-78; Afghan War, 1878-80; Burma Expedition, 1885-86; North-West Frontier, India, 1897-98; commanded 1st Brigade Bazaar Valley Expedition, 1908; 1st Brigade Mohmand Field Force, 1908; General Officer Commanding, South China, 1910-13; European War, 1914-15. *Address:* Poona.

ANDERSON, G., M.A. (Oxon.); Secretary, Calcutta University Commission. *b.* 15 May 1876; *m.* to Gladys Alice Morony. *Educ:* Winchester College, University College, Oxford. Transvaal Education Department, 1902-1910; Indian Educational Service; Professor of History, Elphinstone College, Bombay; Assistant Secretary, Department of Education, Government of India. *Publications:* The Expansion of British India; British Administration in India; Short History of the British Empire. *Address:* Armadale, Simla.

ANNANDALE, (Thomas) Nelson, B.A. (Oxon.), D.Sc. (Edin.), F.L.S.; corresponding member of the Zoological Society of London, Director of the Zoological Survey of India, 1916; Superintendent of the Indian Museum and Secretary to the Trustees, 1906-16; *e. s.* of late Prof. Thomas Annandale. *Educ.:* Rugby; Edinburgh University; Balliol College, Oxford. *Address:* Indian Museum Calcutta.

ANSTEY, Percy Lewis, B. Sc. (Econ.); London, 1910; Principal, Sydenham College of Commerce and Economics. *b.* 25 Feb. 1876. *m.* to Vera *nee* Powell (B. Sc. Econ. London). *Educ.:* Luisen Gymnasium, Berlin. Felsted School; St Paul's School; University of Vienna; London School of Economics and Political Science. Business, 1910-11. Lecturer in Economics, University of Sheffield, 1911-14; Head of Economics Department, University of Bristol, 1914-18; Principal, Sydenham College, Bombay. *Publications:* The abuse of the Psychological Method in Sociology: A New Basis of Rating. *Address:* Dongarsi Road, Malabar Hill, Bombay.

ARCHBOLD, W. A. J., M.A., LL.B.; Principa of the Government College, Dacca, 2nd *s.* of Alfred Jobson, late of Darlington, and nephew of late James Archbold Pears Archbold; late scholar and prizeman of Peterhouse; late Principal of the Mahomedan Anglo-Oriental College, Aligarh. *Address:* Government College, Dacca.

ARCOT, Prince of, Hon. Sir Ghulam Mahomed Ali Khan Bahadur, G.C.I.E (1917); K.C.I.E. (1909). *b.* 26 Feb. 1882; *s.* father, 1903. Premier Mahomedan nobleman of Southern India, being descended from the former Mussulman dynasty of the Nawabs of the Karnatic. *Educ.:* Newington Court of Wards Institution, Madras. Member of Madras Legislative Council, 1901-6; Member of the Imperial Legislative Council (Mahomedan Electorate) of the Madras Presidency, 1910-13; Member of the Madras Legislative Council by nomination, 1916. President, Madras Presidency Muslim League. *Address:* Amir Mahal, Madras.

ARDEN-WOOD, William Henry Hefton, C.I.E. (1913); M. A. (Oxon.), F.R.G.S.; Hon. Fellow of Calcutta University; Principal of La Martiniere College, Calcutta, since 1892; *b.* 27 Nov. 1858; *e. s.* of late Rev. J. Wood, M.A. (Oxon.), Highfield, Wigan; *m.* 1893, Margaret Louisa, *e. d.* of E. E. Lowis, late B.C.S. *Educ.:* Manchester Grammar School: Christ Church, Oxford. Assistant Master, Grantham Grammar School, 1883-85. La Martiniere, Calcutta, 1885-89; Principal, Victoria College, Cooch Behar, 1889-92; first President, Calcutta University Teachers' Association, 1905; President, Anglo-Indian Association, 1913; Member, Bengal Legislative Council, 1917. *Address:* 11, London Street, Calcutta.

ARTHUR, Sigismund Raynor, I.C.S.; Commissioner of Customs, Salt and Excise, Bombay, *b.* 9 February 1867; *m.* to Constance Eleanor, *d.* of the late Sir Charles Hobhouse, Bart. *Educ.:* Charterhouse and New College, Oxford. Assistant Collector and Magistrate, 1889; Forest Settlement Officer, 1900, Collector and Magistrate, 1905; Additional Member, Imperial Legislative Council, 1912. Additional Member, Bombay Legislative Council, 1916. *Address:* Custom House, Bombay.

ASSAM, Bishop of, since 1915, Rt. Rev. Herbert Pakenham Pakenham-Walsh, D.D. (Dub.); *b.* Dublin, 22 March 1871; 3rd son of late Rt. Rev. William Pakenham Walsh, Bishop of Ossory, and Clara Jane Ridley; *m.* 1916, Clara Ridley, *y. d.* of Rev. F. C. Hayes. *Educ.:* Chard Grammar School; Birkenhead School; Trinity College, Dublin; Deacon, 1896; worked as a member of the Dublin University Brotherhood: Chhota Nagpore, India, 1896-1903; Principal, S. P. C. College, Trichinopoly, 1904-07; Head of the S. P. G. Brotherhood, Trichinopoly—moved to Bangalore, 1907-14; *Address:* Shillong, Assam.

ASTON, Arthur Henry Southcote, M.A. (Oxon.); Chief Presidency Magistrate and Revenue Judge, Bombay; *b.* 4 July 1874: *m.* to Lilian, *d.* of the late Col. A. R. Savile. *Educ:* Harrow School, Balliol College, Oxford. Joined Lincolns Inn: called to the Bar: practised as a barrister, Bombay High Court, 1902: Public Prosecutor in Sind, 1906: Chief Presidency Magistrate, Bombay, 1906. *Publications:* Joint Editor, Starlings Indian Criminal Law (8th Edition). *Address:* Esplanade Police Court, Bombay.

ATKINSON, Hon. Cecil Thomas, K.C., 1913; Puisne Judge of the High Court of Behar and Orissa, since 1915; *e. s.* of Baron Atkinson · *b.* 23 October 1876; *m.* 1903, Florence, *d.* of Godfrey Lovelace Taylor of Grangeville, Co. Wexford. *Educ.:* Trinity College, Dublin, B.A., called to the Irish Bar, 1901. *Address:* Patna.

AYLING, Sir William Bock, Kt. (1915); Judge of the High Court of Judicature, Madras, since 1912; *b.* 30 August 1867; *s.* of Frederick William Ayling; *m.* 1894, Emma Annie Graham (d. 1912); *Educ.:* Weymouth College; Magdalene College, Cambridge. Entered I.C.S., 1886. *Address:* Madras.

AZIZ-UD-DIN, Munshi, C.I.E., 1909; C.V.O., 1911; Deputy Commissioner, Berar; Acting Hon. A. D. C. to King George during Indian tour when Prince of Wales. *Address:* Berar.

BABER SHUM SHERE JUNG BAHADUR RANA, General Sir, K.C.I.E., (Hon.) *cr.* 1916; Nepalese Army; *b.* Katmandu, Nepal, 27 Jan. 1888; 2nd *s.* of Maharaja of Nepal; *m.* 1903, Deva Vakta Lakshmi Devi: Director-General Police Forces, Katmandu, since 1903; attached to the General Staff, Army Headquarters, India, as Inspector-General of the Nepalese Contingents on General Service in India, 1915. *Address:* Shingha Durbar and Baber Mahal, Katmandu, Nepal.

BABINGTON, Col. David Melville, C.I.E., 1907; R.G.A.; Superintendent of Cordite Factory, India; *b.* 22 April 1868; *m.* 1898, Violet Mary, *d.* of Col. Greenstreet, R.E., *Address:* Cordite Factory, Aruvankadu.

BAGCHI, Satischandra, B.A., LL.D., Bar-at-Law; Principal, University Law College, Calcutta; *b.* Jan. 1882; *Educ.:* Santipur Municipal School; Calcutta; St. John's College, Cambridge, B.A., Calcutta University, 1901; B.A., LL.B., Cambridge and Dublin; LL.D., Trinity College, Dublin 1907; Fellow, Calcutta University, 1909; Tagore Professor of Law, 1915; called to Bar, Gray's Inn, 1907. *Address:* Principal's Quarters, Darbhanga Buildings, University Law College, Calcutta.

BAIN, Francis William; Principal and Professor of History and Political Economy in the Deccan College, Poona; *b.* Bothwel, Lanark, 1863; *m.* 1899, Helen Margarita, *d.* of Henry Blandford, Dorset; *Educ.:* Westminster School; Christ Church, Oxford, 1st Class Litt. Hum., 1886; Captain, O.U.A.F.C., 1886; Fellow of All Souls College, 1889-96. *Publications* Christina of Sweden, a biography; The Principle of Wealth Creation: The Realisation of the Possible; The English Monarchy and its Revolutions; The Corner in Gold; De Vi Physica at Imbecillitate Darwiniana; A Digit of the Moon; A Heifer of the Dawn; A Draught of the Blue; An Incarnation of the Snow; Bubbles of the Foam; and other works. *Address:* Deccan College, Poona.

BALRAMPUR, Maharaja Bahadur of, Sir Bhagwati Prasad Singh, K.C.I.E.; Member of the Legislative Council of the U.P. of Agra and Oudh; Hon. Fellow of the University of Allahabad for life; Chairman, Municipal Board, Balrampur; Special Magistrate; *b.* 19th July 1879; S. 1893. *Address:* District Gonda, Oudh.

BANARJI, Hon. Sir Pramada Charan, Kt., *cr.* 1913; B.A., D.L., Puisne Judge High Court, N. W. Provinces since, 1893; joined the service, 1872. *Address:* Allahabad.

BANATVALA, Col. Hormasjee Eduljee, C.S.I., 1917; I.M.S., Inspector-General of Civil Hospitals, since 1914; Member of Council of Chief Commissioner, Assam First Commission, 1884; military duty until 1893; served Burma, 1886-89; Lushai Expedition, 1882. *Address:* Shillong, Assam.

BANERJEE, Surendranath, B.A.; Editor of the "Bengalee;" Professor of English Literature, Ripon College; *b.* 10 Nov. 1848; *m.* 1867; *Educ.:* Doveton College, Calcutta; University College, London. Entered I.C.S., 1871; left the service 1874; Professor of English Literature, Metropolitan Institution of Calcutta, 1875; founded Indian Association, 1876; founded Ripon College Calcutta, 1882; was twice President of the Indian National Congress; for eight successive years a Member of the Bengal Legislative Council; again elected 1913; Member of the Imperial Legislative Council, 1913. *Address:* Bengalee Office, Calcutta.

BANERJEE, SIR GOOROO DASS, KT., *cr.* 1904; M.A.D.L., Ph. D., retired High Court Judge; *b.* Narikeldanga, Calcutta, Jan. 1844; *m.* 1861, 3rd *d.* of Pandit Pitambar Tarkapanchanan. *Educ.:* Hare School; Presidency College, Calcutta. Vakil of the Calcutta High Court, 1866; Assistant Lecturer in Mathematics, Presidency College, 1865; Law Lecturer in the Berhampur College, 1866-72; Tagore Law Lecturer, 1878; Fellow of Calcutta University, 1878. Vice Chancellor, 1889-91; Municipal Commissioner for the suburbs of Calcutta, 1886; Presidency Magistrate, 1887; Member of the Bengal Legislative Council, 1888; Judge of the Calcutta High Court, 1889-1903; President of the Central Text-Book Committee, 1896-99; Member of the Indian Universities Commission, 1902; Hon. Ph.D., 1908. *Publications* include:—The Education Problem in India, 1914. *Address:* 28, Sastitala Road, Narikeldanga, Calcutta.

BANERJI, ALBION RAJKUMAR, M.A., I.C.S., C.I.E., 1912; *b.* Bristol, 10 Oct. 1871; *m.* 1898, *d.* of Sir Krishna Gupta. *Educ.:* Calcutta University; Balliol College, Oxford; M.A., 1892. Entered I.C.S., 1895; served as district officer in the Madras Presidency; Diwan to H. H. the Maharaja of Cochin, 1907-14; reverted to British service, 1915; Collector and District Magistrate, Cuddapah; services placed at the disposal of Government of India Foreign Department for employment as Member of the Executive Council of H. H. the Maharaja of Mysore, March 1916. *Address:* Bangalore.

BARBER, CHARLES ALFRED, Sc. D. (Cantab.), F.L.S., Sugar Cane Expert for India; *b.* Wynberg, South Africa, 1860; *s.* of Rev. Wm. Barber; *m.* Edith Leather, *d.* of Rev. G. R. Osborne; one *s.* one *d. Educ.:* Kingswood School, Bath; Bonn University; Christ's College, Cambridge (Scholar). Demonstrator and Lecturer at University College, London and Cambridge University; Superintendent of Agriculture, Leeward Islands; Professor of Botany, R.I.E. College, Cooper's Hill; Government Botanist, Madras. *Address:* Agricultural College, Coimbatore, S. India.

BARIA, MAHARAWAL SHRI RANJITSINHJI MANSINHJI, RAJA OF; *b.* 10 July 1886; one *s.* one *d. Educ.:* Rajkumar College, Rajkot; Abbotsholm School, Derbyshire; Imperial Cadet Corps, Dehra Dun. Hon. A. D. C. to Governor of Bombay, 1913; *Address:* Baria, Rewa Kantha, Bombay.

BARLOW, GEORGE THOMAS, C.I.E., 1915; Chief Engineer and Secretary, Government Irrigation Branch, U. P.; *b.* 11 March, 1865: *s.* of Rev. J. M. Barlow, Ewhurst Rectory, Guildford; *m.* 1891, A. S. Anthony; two *s.* two *d. Educ.:* Haileybury: R.I.E., College. Appointed P. W. D., India, 1886. *Address:* Allahabad, U. P.

BARNARDO, FREDERICK ADOLPHUS FLEMING, M.A., B.Sc., M.B., 1899; F.R.C.S., M.R.C.P. (Edin.) Created C.I.E., 1898; Assistant Director of Medical Services, Embarkation Staff, Bombay, Colonel, Indian Medical Service; *b.* June 4, 1874; *m.* to Violet Kathleen Ann, 2nd daughter of the late Henry Teviot-Kerr, seventh son of the late Rev. Lord Henry Frances Teviot-Kerr; *Educ.:* Edinburgh University. Served with the Fife and Forfar Light Horse Imperial Yeomanry in South Africa, 1899-1902; entered Indian Medical Service, July 22nd, 1902; Somaliland Campaign 1903-4; Captain, July 22nd, 1905; Major, June 22nd, 1914; Brevet Lt.-Colonel, 1 January 1917; Temporary Colonel, 1st May 1918. Created C.I.E., 1918; *Pub.:* Many contributions to Medical publications, and the following monographs:—Surgical Shock, Intestinal Stasta. The causation of the Onset of Labor, etc. *Address:* 9 Queen's Road, Bombay.

BARNES, SIR GEORGE STAPYLTON, K.C.B. (1915), C.B. (1909): Member of the Council of the Viceroy of India, since 1916; *b.* Umballa, India, 8 February, 1858; *e.s.*, of late George Carnac Barnes, C.B., formerly Foreign Secretary in India, and Margaret Diana, *d.* of late Major Henry Chetwynd-Stapylton; *m.* Sybil de Gournay, *d.* of late Charles Buxton, M.P., of Foxwarren, Cobham, Surrey; two *s.* one *d. Educ.:* Eton; University College, Oxford. Barr. Inner Temple, 1883; assisted the late Lord Russell of Killowen in his work at the bar, 1883-1893; Counsel to Board of Trade in Bankruptcy matters, 1886; Official Receiver in Companies Liquidation, 1893; Senior Official Receiver, 1896; Comptroller of the Companies Department of the Board of Trade, 1904-11; Comptroller General of the Labour Department of the Board of Trade, 1911-13; Second Secretary, Board of Trade, 1913; Joint Permanent Secretary, 1915; *Address:* Simla and Delhi; Foxholm, Cobham, Surrey.

BARODA, H. H. MAHARAJA GAEKWAR SIR SAYAJI RAO III., G.C.S.I. (1881); *b.* 10 March, 1863; *m.* 1st., 1881, Chimnabai Maharani: 2nd, 1885, Chimnabai Maharani, II., C.I.; three *s.* one *d. Educ.:* Maharaja's School, Baroda. Succeeded, 1875. Invested with powers 1881. *Address:* Baroda.

BARRATT, MAJOR GENERAL WILLIAM CROSS, C.B., 1911; D.S.O.; Indian Army; Commdg. 16th Indian Division; *b.* 2 June, 1862; 3rd *s.* of late James Barratt, of Hanslope, Bucks; *m.* 1907, Katherine Mathilde Goldsmith, formerly of Betton Hall, Market Drayton. *Educ.:* Bedford Grammar School. Entered Army 1883, Served Soudan Expedition, 1885; Zhob Valley Expedition, 1890; Waziristan, 1894-95; East Africa, 1896, Uganda, 1897-98; China, 1901, N. W. Frontier, India; Darwesh Khel Wazirs Expedition. *Address:* Lahore Cantonment.

BARRETT, LIEUT.-GENERAL SIR ARTHUR ARNOLD, (1908) K.C.B., K.C.S.I., (1915), K.C.V.O., (1912); C.B., (1903); Commanding Northern Command; *b.* 3 June 1857; 3rd *s.* of late Rev. Alfred Barrett, D.D.: *m.* 1st., 1894, Mary (*d.* 1897), *d.* of James Haye of Fowey, Cornwall; 2nd 1907 Ella, *d.* of H. Lafone, 59 Onslow Square, S. W.; one *d.* Entered Army, 1875; Captain, 1886; Major 1895; Lieut.-Col. 1901; served Afghan War, 1879-1880; march to Kandahar and battle of Kandahar; Hazara, 1888; 2nd Miranzai Expedition, 1891; Hunza Nagar Expedition, 1891; N. W. Frontier, India, 1908; Bazar Valley

Expedition; Mohmand Expedition; Adjt. Genl. in India, 1909-12: Divisional Commander, Poona, 1912-14. *Address:* Rawal Pindi.

BARRON, CLAUD ALEXANDER, C.I.E. (1911), F.R.G.S.; District and Sessions Judge, Punjab, since 1916; *b.* 22 December, 1871; *s.* of Col. W. Barron, B.S.C.; *m.* 1912, Ida Mary, *s. d.*, of Col. R. H. Ewart; one *s. Educ.:* Grammar School and University, Aberdeen; Clare College, Cambridge. Entered, I.C.S. 1890; Chief Secretary, Punjab Government, 1912-16. *Address.;* Jullundur, Punjab.

BARTHE, RT. REV. JEAN MARIE; BISHOP OF PARALAIS since 1914; *b.* Lesignan, Tarbes, 1849. *Educ.* St. Pe. Seminary. Bishop of Trichinopoly, 1890-1914. *Address:* Trichinopoly, Madras Presidency.

BASU, SIR KAILAS CHUNDER, RAI BAHADUR, KT., *cr.* 1916, C.I.E., 1910; Kaiser-i-Hind, 1909; Fellow, Calcutta University; Vice-President Indian Medical Congress; Fellow, R. Institute of Public Health; Member, British Medical Association; Member of the Corporation of Calcutta and Hon. Presidency Magistrate; 2nd *s.* of late Babu Madhusan Basu. *Address:* 1, Sukea Street, Calcutta.

BEACHCROFT, HON. MR. JUSTICE CHARLES PORTEN; Puisne Judge, High Court, Calcutta, since 1915; *b.* 13 March 1871; 4th son of late Francis Porten Beachcroft, Bengal Civil Service; *m.* Elizabeth, *d.* of late A. E. Ryles. *Educ.:* Rugby; Clare College, Cambridge. Passed Indian Civil Service, 1890; Assistant Magistrate and Collector, Bengal, 1892; Officiating District and Sessions Judge, 1900; District and Sessions Judge, 1906; Officiating Judge, High Court, Calcutta, 1912. *Address:* 4, Little Russell Street, Calcutta.

BEAMAN, SIR FRANK CLEMENT OFFLEY, KT., (1917); *Educ.:* Bedford Grammar School; Queen's College, Oxford. Entered, I.C.S., 1877; Assistant Judge 1885; Special Settlement Officer, Baroda, 1886-87; Judicial Assistant to Political Agent, Kathiawar, 1891; Judge and Sessions Judge, 1896; Judicial Commissioner and Judge of Sadar Court in Sind, 1904. Judge of the High Court, Bombay, 1907-18. *Address:* Byculla Club, Bombay.

BEDI, SIR BABA GARBAKSH SINGH, KT., *Cr.* 1916; C.I.E., 1911; Hon. Extra Assistant Commissioner in the Punjab. *Address:* Kallar, Punjab.

BEER BIKRAM SINGH, RAJKUMAR, HON. LT.-COL., C.I.E.; A. D. C. to the Viceroy 1906; Officer Commanding Sirmour Imperial Service Sappers and Miners; also attached to 1st P.W.O. Sappers and Miners. Served in the Tirah expedition, 1897-98; *Address:* Sirmour State, Punjab.

BELL, CHARLES ALFRED, C.M.G., 1915; I.C.S.; Political Agent for Tibet, Bhutan and Sikkim; *b.* 31 October, 1870; *e.* surv. *s.* of Henry Bell, I.C.S., and Anne, *d.* of George Dumbell, banker, of Douglas, Isle of Man; *m.* Cashie Kerr, *d.* of David Fernie, shipowner of Warrenside, Blundellsands, Lancashire; one *s.* one *d. Educ.:* Winchester; New College, Oxford. Joined Bengal Civil Service, 1891; conducted exploratory Mission in Bhutan in 1904, and political mission to that country in 1910, concluding a treaty, by which the foreign relations of Bhutan were placed under the British Government; on political duty in Tibet, Bhutan and Sikkim in 1904-05, 1906 and since 1908; was employed on the Tibet Conference between Great Britain, China and Tibet, 1913-14. *Publications:* Manual of Colloquial Tibetan and other Tibetan works. *Address:* Gangtok, Sikkim.

BELL, COLONEL GEORGE JAMES HAMILTON, C.I.E., 1914; M.B.C.M., Edinburgh; I.M.S.; Inspector General of Civil Hospitals, Bihar and Orissa; *b.* 28 February, 1861; *s.* of Robert Bell, advocate; *m.* 1890, Violet Helen Mary, *d.* of Lestock Reid Forbes; one *s.* two *d. Educ.:* Edinburgh Academy and University. *Address:* Ranchi.

BENARES, H. H. SIR PRABHU NARAYAN SINGH, MAHARAJA BAHADUR OF, G.C.I.E. (1898); *b.* 26 November 1855; *S.* uncle 1889. *Address* Ramnagar, Benares.

BENN, LT.-COL. ROBERT ARTHUR EDWARD, C.I.E., 1904, F.R.G.S.; Indian Army; Resident at Jaipur, Rajputana, since 1915; *b.* 4 February, 1867; *e. s.* of late Charles Edward Benn; *m.* 1898, Edith Annie Fraser, 3rd *d.* of late Maj.-Gen. Neville Parker (retired), Bengal Army; one *s.* one *d. Educ.:* Merchant Taylors' School, Great Crosby; Heidelberg Coll., Germany; R. M. C. Sandhurst. Entered Army, 1887; Appointed to the Indian Political Department, 1895; *Address.* Jaipur, Rajputana.

BENZIGER, RT. REV. ALOYSIUS MARY, O.C.D., Bishop of Quilon since 1905; *b.* Einsoedeln, Switzerland, 1864. *Educ.:* Frankfort; Brussels; Downside. Came to India, 1890; Bishop of Tabar, 1900; *Address:* Bishop's House, Quilon, Madras.

BESANT, ANNIE; President, Theosophical Society; author and lecturer on religous, philosophical and scientific subjects; *b.* 1 October, 1847; *d.* of William Page Wood and Emily, *d.* of James Morris; *m.* 1867, Rev. Frank Besant (*d.* 1917), Vicar of Sibsey, Lincolnshire; legally separated from him, 1873; one *s.* one *d. Educ.:* privately in England, Germany, France; Joined the National Secular Society, 1874; worked in the Free Thought and Radical Movements led by Charles Bradlaugh, M.P.; was co-editor with him of the National Reformer. Member of the London School Board, 1887-90. Joined the Theosophical Society in 1889; became a pupil of Mme. Blavatsky; elected its President in 1907. Founded 1898 the Central Hindu College at Benares; 1904, the Central Hindu Girls' School, Benares; is working to found the University of India. *Address:* Adyar, Madras.

BEVILLE, LT.-COL. FRANCIS GRANVILLE, C.I.E., 1908; Resident, Gwalior, since 1914; *b.* 24 March, 1867. Lt. N. Staffs. Regiment, 1886; Indian Staff Corps, 1888; Captain, Indian Army, 1897; Major 1904; Lt.-Col., 1912; Acting Consul, Muscat, 1896; Consul

1896-97; Political Agent, Bundelkhand, 1900-4; Bhopawar, 1905-12. *Address:* Gwalior.

BHAGWATI, PRASADH SINGH, MAHARAJA SIR OF BALRAMPUR, K.C.I.E., Cr. 1906; *s.* 1896. *Address:* Gonda, Oudh, India.

BHANDARKAR, SIR RAMKRISHNA GOPAL, K.C.I.E. (1911); C.I.E., (1889); M.A., Hon. LL.D., Bombay and Edinburgh; Hon. Ph. D., Calcutta; Professor of Oriental Languages, Deccan College, Poona, 1882-93; *b.* 1837; *m.* two *s.* one *d. Educ.:* Ratnagiri Government English School; Elphinstone College, Bombay, 1847-58. Headmaster of High Schools, 1864-68; Professor of Sanskrit, Elphinstone College, Bombay, 1869-1881. Fellow, and for two years Vice-Chancellor of Bombay University; Fellow of Calcutta University; nominated to membership of Viceroy's Legislative Council in connection with Lord Curzon's Educational Reforms, 1903; Member of Bombay Legislative Council, 1904-08; a leader of Hindu social and religious reform movements; Dakshina Fellow, 1859-64. *Publications:* First and Second Books of Sanskrit; Early History of the Deccan; Sanskrit and the Derived Languages; article on Vaisnavism, Saivism and minor religious systems, in the Encyclopædia of Indo-Aryan Research; edited Bhavabhuti's Malati-Madhava, and has written six reports on Sanskrit MSS., philological and antiquarian articles and essays in the Transactions of learned societies. *Address:* Poona.

BHARATPUR, MAHARAJA OF, H. H. SRI MAHARAJA BRAJENDRA SAWAI KISHAN SINGH BAHADUR JUNG; *b.* 4 October, 1899; *s.* of Maharaja Ram Singh; *m.* sis. of H. H. the Raja of Faridkot. *Educ.:* Mayo College, Ajmere; and Wellington. *Address:* Bharatpur, Rajputana.

BHATAWADEKAR, SIR BHALCHANDRA KRISHNA, KT. (1900); L.M.; J.P.; Medical Practitioner, Bombay, since 1885; *b.* 19 February, 1852; *s.* of Krishna Shastri Bhatawadekar and Rakhmabai; *m.* Savitribai; three *s.* two *d. Educ.:* Elphinstone High School; Grant Medical College, Bombay. Additional Member of Legislative Council, 1897-1899; Legislative Council 1901; Member of the Improvement Trust; President of the Indian Temperance Association and of the Temperance Council; President of the 14th Bombay Provincial Conference, 1907; Syndic in Medicine, 1912-13. *Address:* Girgaon, Bombay.

BHAVNAGAR, H. H. MAHARAJA SIR BHAVSINHJI TAKHTASINHJI, K.C.S.I., MAHARAJA OF; *b.* 26 April, 1875; *s.* father (Sir Takhatsinhji Jaswatsinhji, G.C.S.I.), 1896; *m.* 1905, H. H. Maharani NandkuVerba, C.I., who died 1918; two *s.* one *d. Address:* Bhavnagar, Kathiawar.

BHOPAL, H.H. NAWAB SULTAN JEHAN BEGUM, BEGUM OF C.I., *cr.* 1911; G.C.S.I., *cr.* 1910; G.C.I.E., *cr.* 1904; *b.* 9 July 1858; *s.* mother (H. H. Nawab Shah Jehan Begum, G.C.S.I., C.I.), 1901; *m.* 1874, Ahmed Ali Khan, three *s.* Eighth in lineal descent from the famous Dost Mahomed Khan, founder of the dynasty. *Address:* Bhopal, Central India.

BHORE, JOSEPH WILLIAM, B.A., (Bombay); *b.* 6 April 1879. *m.* to Margaret Wilkie Stott, M.B., Ch.B., (St. Andrews). *Educ.:* at Deccan College, Poona; University College, London; Corpus Christi College, Oxford; Assistant Collector; Under-Secretary to the Madras Government; Dewan of Cochin. *Address:* Trichur, Cochin State.

BIKANER, MAHARAJA OF, COL. H. H. RAJ-RAJESHWAR NARENDRA SHIROMANI SRI SIR. GANGA SINGH BAHADUR, G.C.S.I., *cr.* 1911; G.C.I.E., *cr.* 1907, K.C.S.I., *cr.* 1904; K.C.I.E., *cr.* 1901; A. D. C.; Hon. LL.D., Cambridge; *b.* 3 October 1880; succeeded 1887; two sons, one *d.* Invested with full ruling powers, 1898; granted Hon. Commission of Major in the British Army, 1900, and attached to 2nd Bengal Lancers; served with British Army in China in command of Bikaner Camel Corps, 1901; served European war, 1914-15; a representative of India at Imperial War Conference, 1917 and at the Peace Conference; Freeman of City of London. *Address:* Bikaner, Rajputana.

BILGRAMI, SYED HOSSAIN, NAWAB, IMADUL MULK, BAHADUR, C.S.I., 1908; *b.* Gya, 18 October, 1844; *s.* of Syed Zainuddin Hossain Khan Bahadur of the Uncovenanted Civil Service, Bengal; *m.* 1st, 1864, wife died 1897; *m.* 2nd, Edith Boardman, L.S.A., (Lond.), M.D.; four *s.* one *d. Educ.:* Presidency College, Calcutta. Professor of Arabic, Canning College, Lucknow, 1866-73; Private Secretary to H. E. Sir Salar Jung till his death; Private Secretary to H. H. the Nizam; Director of Public Instruction of H. H. the Nizam's Dominions; Member of the Legislative Council, Member of the Universities Commission 1901-2; retired 1907; Member of Council of Secretary of State for India, 1907-09; *Publications*; Life of Sir Salar Jung; Lectures and addresses; (in collaboration) Historical and Descriptive Sketch of His Highness the Nizam's Dominions, 2 vols. *Club:* United Service, Secunderabad.

BINGLEY, MAJOR-GENERAL ALFRED HORSFORD, C.B., 1915; C.I.E., 1909; *b.* 28 May 1865; *s.* of late Peregrine Taylor Bingley; *m.* 1893, Mabel, *e. d.* of late Col. G. A. Way, C.B.; one *d. Educ.:* Kensington School, R.M.C., Sandhurst. Lieut. Leinster Regiment, 1885; Captain, Indian Army, 1896; Deputy Adjutant-General, Headquarters Staff, India, 1914; Sec. Army Department, Government of India, 1916; served in Burma 1891-92 and in China, 1900; Gold Medal United Services Institution of India, 1896. *Publications:* Series of Handbooks on the Classes recruited in the Indian Army. *Address:* Simla.

BINNING, SIR ARTHUR WILLIAM, KT., (1916); Merchant in Rangoon; *b.* 5 August 1861; *s.* of Robert Binning, Glasgow; unmarried. *Educ:* Glasgow Academy. *Address:* Rangoon, Burma.

BIRD, LIEUT.-COL. ROBERT, C.I.E., 1905; M.V.O., 1912; V.H.S., 1916; M.D., M.S., (Lond.), F.R.C.S., D.P.H. (Camb.), I.M.S. Surgeon to the Viceroy, 1904; Professor of Surgery, Medical College, Calcutta, since

1908; *b.* 12 December, 1866; *m.* 1909, Harriet Ellen, *d.* of late Lt.-Col. Dewar, Royal Artillery. *Address*: 2, Upper Wood Street, Calcutta.

BIRKETT, Sir Thomas William, Kt., 1918. Merchant, Killick Nixon & Co., Bombay and. Calcutta. *b.* 11 March 1871; *m.* to Dorothy Nina Forbes. *Educ.*: Cheltenham College Chairman, Bombay Chamber of Commerce, 1915-16; Additional Member, Bombay Governor's Council, 1914; Additional Member, Viceroy's Council, 1915-16. Sheriff of Bombay, 1917. *Address*: Pali Hill, Bandra, Bombay.

BIRLEY, Leonard, C.I.E., 1914; Revenue Secretary to Government of Bengal, since 1915; *b.* 30 May 1875; *s.* of late Arthur Birley; *m.* 1908 Jessie Craig, *d.* of late Maxwel Smith, Hursingpur, Tirhoot, India; one *s.* one *d.* *Educ.*: Uppingham; New College, Oxford. Entered I.C.S., 1897; Joint Magistrate and Deputy Collector, 1907; Magistrate and Collector, 1911. *Club*: United Service, Calcutta.

BLAIR, Andrew James Fraser, Statesman Editorial staff, Calcutta; Founded the Eastern Bureau, Limited, Calcutta, 1912; late Editor and Managing Director, The Empire, Commerce, The Empire Gazette (daily and weekly newspapers published in Calcutta); *b.* Dingwall, Ross-shire, 30 September, 1872; *y. s.* of late Andrew Blair, Rector, Dingwall Burgh School, and Mary Ann Campbell, *d.* of late Thomas Duff, Glasgow; *m.* 1900, Constance, *e.d.* of Thomas Ibbotson; one *s.* one *d.* *Educ.*: Glasgow High School. Engaged in journalism, since 1890; *Address*: 6, Chowringhee, Calcutta.

BLENKINSOP, Brig.-General Layton John, D.S.O., 1898, F.R.G.S.; Director, Veterinary Services in India; *b.* 27 June 1862; 3rd son of Lieut.-Colonel William Blenkinsop and Elizabeth, *d.* of William Sandford; *m.* 1905, Ethel Alice, *d.* of John Wells, J.P., Booth Ferry House, Goole, *Educ.*: King's School, Canterbury; Royal Veterinary College, London. Entered A. V. Department, 1883; Punjab Government and Professor, Lahore Veterinary College, 1891-93; S.V.O., for British Troops, Soudan Expedition, 1898; senior Veterinary officer in Egypt, 1896-99; served South Africa 1899-1902 and S.V.O., Remounts in South Africa to December 1902. *Address*: Army Headquarters, India. *Club*: Junior United Service.

BLENKINSOPP, Edward Robert Kaye, C.I.E. (1911); *b.* 15 May 1871; *s.* of Col. Blenkinsop; *m.* Florence Edith, *d.* of late Sir Stanley Ismay, K.C.S.I., three *s.* *Educ.*: St. Paul's School; Christ's College, Cambridge. Entered I.C.S., 1890; Settlement Officer, 1897; Deputy Commissioner, 1902; Kaiser-i-Hind Medal, 1903; Commissioner of Excise, 1906; Chief Secretary to Chief Commissioner, 1912-13. *Address*: Nagpur, C. P.

BOLTON, Horatio Norman, C.I.E. 1916; Deputy Commissioner, N. W. Frontier Province, since 1912, *b.* 1 Feb. 1875; *m.* 1911, Ethel Frances, *d.* of late Captain J. C. H. Mansfield Castle Wray, Co. Donegal; *Educ.*: Rossall; Corpus Christi College, Oxford (B. A.). Entered I.C.S., 1897; Deputy Commissioner, Dera Ismail Khan, 1904; Kohat, 1909; Sessions Judge, Peshawar, 1910-11; Political Agent, Dir, Swat, and Chitral, 1911-12. *Address*: Peshawar.

BOMBAY, Bishop of, since 1908; Rt. Rev. Edwin James Palmer: *o. s.* of late Archdeacon Palmer of Oxford, and *nephew* of 1st Lord Selborne; *m.* 1912, Hazel, *y. d.* of Col. E. H. Hanning-Lee, Eighton Manor, Alresford. *Educ.*: Winchester and Balliol Coll., Oxford. Ordained, 1896; Fellow, Balliol College, 1891; Tutor, 1893; Chaplain, 1896; Examining Chaplain to Bishop of Southwell, 1899-1904; to Bishop of Rochester 1904-05: to Bishop of Southwark, 1905-08. *Address*: Bishop's Lodge, Malabar Hill, Bombay.

BOOTH TUCKER, Frederick St. George de Lautour, Commissioner in the Salvation Army; *b* Mong'yr, Bengal, 21 Mar. 1853; *m.* 1906, Lt.-Col. Minnie Reid. *Educ.*: Cheltenham College. Passed Indian Civil Service examinations, 1874; appointed to Punjab, resigned to join the Salvation Army, 1881; inaugurated Salvation Army Work in India, 1882; Foreign Secretary at Salvation Army Head-quarters, London, 1891-96; Commander of the Salvation Army forces in U. S. America until 1904; reappointed Foreign Secretary at International Headquarters, 1904; returned to India as Special Commissioner for India and Ceylon, 1907. *Address*: Salvation Army Headquarters, Simla.

BOSANQUET, Oswald Vivian, C.I.E. 1910; C.S.I. 1914; Agent to Governor-General, Central India, since 1913; *b.* 5 April 1866; *m.* 1886 Alys, *d.* of Admiral Derriman. *Educ.*: Clifton College; New College, Oxford. Joined Indian Civil Service, 1887; Indian Political Department, 1890; served in Hyderabad and Rajputana; acting Under-Secretary to Govt. of India, Foreign Dept., 1895 to 1898; Political Agent, Bhopawar, 1899; Resident at Indore, 1903; Resident at Baroda; 1909; special duty, Foreign Dept., 1911-13. *Address*: Indore.

BOSE, Sir Bipin Krishna, Kt. *cr.* 1907; C.I.E., 1898; M. A.; Government Advocate in the Central Provinces; *b.* 1857. *Address*: Nagpur C. P.

BOSE, Sir Jagadis Chandra Kt. *cr.* 1917; C.I.E. 1903; C.S.I. 1911; M.A. (Cantab.), D. Sc. (Lond.); Professor Emeritus of the Presidency College, Calcutta; Founder Director of Bose Research Institute; *b.* 30 Nov. 1858; *Educ.*: Calcutta; Christ's College, Cambridge; Delegate to International Scientific Congress, Paris, 1900; scientific member of deputation to Europe and America, 1907 and 1914. Published numerous books on the physiology of plants. *Address*: Bose Institute, Calcutta.

BOURNE, Sir Alfred Gibbs, K.C.I.E. *cr.* 1913; C.I.E., 1908; F.R.S., F.L.S., C.M.Z.S.; Director of the Indian Institute of Science, Bangalore; *b.* Lowestoft, 8 Aug. 1859; *m.* Emily Tree Glashier, 1888; *Educ.*: University College, School: Royal School of Mines: University College, London. D.Sc. London: Fellow of University College, London; Presi-

dent of the Faculty of Arts in the University of Madras. Assistant to E. Ray Lankestar, 1879-85; appointed to Madras, 1885: Registrar of the Univ. of Madras, 1891-1899; Director of Public Instruction, Madras, Commissioner for Government Examinations and Additional Member of the Council of Fort St. George, 1903-14. *Address:* Hebbal, Bangalore.

BRAY, DENYS DE SAUMAREZ, C.I.E. 1917; I.C.S.; B.A.: Dep. Sec. to Govt. of India, Foreign and Political Dept.: Assist. to Agent to Governor-General in Baluchistan since 1912. *Educ.:* Blundell's School, Tiverton; Balliol College, Oxford. Entered I.C.S., 1898; Census Superintendent, Baluchistan, 1910. *Address:* Quetta, Baluchistan.

BRAY, SIR EDWARD HUGH. Kt., *cr.* 1917; Senior Partner, Gillanders, Arbuthnot & Co.; President, Bengal Chamber of Commerce; Member of Imperial Legislative Council; Controller of Contracts. Army Headquarters. *b.* 15 Apr. 1874; *m.* 1912, onstance, *fod.* Sir John Graham, 1st Bt. *Educ.:* Charterhouse; Trinity College, Cambridge. *Address:* Gillander House, Calcutta.

BROACHA, SIR SHAPURJI, Kt. *b.* at Broach, 1846; Mill-owner and Agent, Partner in Tullockchand and Shapurji, Brokers. Sheriff of Bombay, 1911. Member of the R. Commission on Indian Finance and Currency 1913. A distinguished philanthropist. *Address:* Bombay.

BROWN, PERCY, A.R.C.A. 1898; Indian Educational Service, 1899; Principal, Government School of Art, Calcutta, since 1909; *b.* Birmingham, 1872; *m.* 1908, *d.* of Lt.-Col. Sir Adelbert Talbot, K.C.I.E.; *Educ.:* Edward VI. Grammar School and School of Art, Birmingham. Principal, Mayo School of Art and Curator, Museum, Lahore, 1899-1909; on deputation, Assistant Director, Art Exhibition, Delhi Durbar, 1902-03; officer-in-charge, Art Section and Trustee, Indian Museum, 1910. *Address:* 28, Chowringhee, Calcutta.

BRUNYATE, JAMES BENNETT, C.I.E., 1910; C.S.I., 1915; Indian Civil Service; Secretary to the Government of India, Finance Department; and Member of Council of India, 1917; *b.* 22 March 1871; *m.* 1897; Annie Purvis, *d.* of W. Tombleson of South Ferriby Hall, Lines; *Educ.:* St. Paul's School; Trinity College, Cambridge. Entered I.C.S., 1889; Member of International Opium Commission at Shanghai, 1909; of Governor-General's Legislative Council.

BUCHANAN, WALTER JAMES, C.I.E. 1913; M.D.; Lt.-Col., Indian Medical Service; Editor of the Indian Medical Gazette, Calcutta, since 1899; Inspector-General of Prisons, Bengal Presidency, since 1902: *b.* Londonderry, 12 Nov. 1861; *m.* Lillan Edith (*d.* 1916), *d.* of late F. Simpson Byrne; *Educ.:* Foyle College, Londonderry; Trinity College, Dublin; Vienna. Entered I.M.S., 1887; took part in Hazara Expedition, 1888; Lushai Expedition, 1890; Manipur Field Force, 1891 (medal and clasp); entered Civil Medical employ, Bengal, 1892; Civil Surgeon, Bengal; Superintendent, Central Jails, Bhagalpur and Alipur. *Address:* The Bengal Secretariat, Calcutta.

BUNBURY, MAJOR-GENERAL WILLIAM EDWIN, C.B. 1911; G.O.C. 2nd (Rawal Pindi) Division, since 1916; *b.* Clonfert, 5 April 1858; *s.* of late Bishop of Limerick; *m.* 1893, Eva Mary, *d.* of Francis Gate, Cheltenham. *Educ.:* St. Columba's College, Rathfarham. Entered Army 1878; Col. 1908; passed Staff College; D.A.G. Northern Army India, 1908; served Afghan War, 1880 (medal); Mahsud-Waziree Expedition, 1881; Isazai Expedition, 1892, Chitral, 1895 (despatches, medal and clasp); Waziristan, 1901, 1902 (despatches, clasp); Commanded Kohat Brigade, May to Nov. 1912; Quartermaster-General in India, 1912-16. *Address:* Rawal Pindi.

BUNDI, H. H MAHARAO RAJA, SIR RAGHUBIR SINGHJI BAHADUR, K.C.S.I., *cr.* 1897, G.C.I.E. *cr.* 1900, G.C.V.O. *cr.* 1911; *b.* 1868. *S.* 1889. *Address:* Bundi, Rajputana.

BURDEN, LT.-COL. HENRY, C. I. E. 1911; F.R.C.S., I.M.S.; Residency Surgeon, Nepal, *b.* 26 April 1867; unmarried. *Educ.:* home, Entered St. Thomas Hospital, London, 1886; entered Indian Medical Service, 1894; served Relief of Chitral (medal and clasp): North-West Frontier, 1897-98 (two clasps). *Address* Nepal.

BURDWAN, HON. SIR BIJAY CHAND MAHTAB, MAHARAJADHIRAJA BAHADUR OF, K.C.S.I., *cr.* 1911; K.C.I.E., *cr.* 1909; I.O.M., *cr.* 1909; F.R.G.S., F.R.S.A., F.R.C.I., F.N.B.A. M.R.A.S.; *b.* 19 Oct. 1881; a Member of 3rd class in Civil Division of Indian Order of Merit for conspicuous courage displayed by him in the Overtown Hall, Calcutta, 7 Nov. 1908; adopted by late Maharajadhiraja and succeeded, 1887, being installed in independent charge of zamindari, 1903; *m.* 1897 Radharani (Lady Mahtab) of Lahore; a Member of Imperial Legislative Council 1909-12; Bengal Legislative Council since 1907; Trustee of the Indian Museum, 1908; Trustee of the Victoria Memorial, Calcutta, since 1914. *Heir:* Maharajadhiraja Kumar Uday Chand Mahtab, *b.* 14 July 1905. *Address:* The Palace, Burdwan; Bijay Manzil, Alipore, Calcutta.

BURN, RICHARD, C.S.I., 1917; Magistrate and Collector, United Provinces, since 1918; *b.* Liverpool, 1 Feb. 1871; *m.* 1899, Grace Irene Cargill; *Educ.:* Liverpool Institute; Christ Church, Oxford. Entered Indian Civil Service, U. P., 1891; Superintendent, Census, and subsequently Gazetteer, 1900; Editor, Imperial Gazetteer of India, 1905. *Address:* Allahabad.

BURNHAM, JOHN CHARLES, C.S.I. 1911; F.I.C., F.C.S.; Manager and Chemist, Cordite Factory, Aruvankadu. *Educ.:* Victoria University, Manchester; served on Sir F. Abels' special committee on explosives, 1888-91; Chemist, Experimental Cordite Factory, Kirkee, 1894. *Address:* Cordite Factory, Aruvankadu.

BURRARD, COL. SIR SIDNEY GERALD, K.C.S.I., *cr.* 1914; C.S.I. 1911; R. E., F.R.S. 1904; Surveyor-General of India, since 1910; Superintendent, Trigonometrical Survey, India, since 1899; *b.* 12 Aug. 1860; cousin and

heir-pres. to Sir H. P. Burrard, 6th Bt.; *m.* 1887, Gertrude, *d.* of Maj.-Gen. C. Haig. *Address:* Dehra Dun.

BURTON, REGINALD GEORGE, BRIGADIER-GENERAL, INDIAN ARMY; *b.* 8 July 1864. 4th *s.* of General E. F. Burton, Madras Army, *m.* to Mary, *d.* of W. W. Lumb, Whitehaven, Cumberland: one *s. b.* 1908. Educated at King William's College, Isle of Man, and Royal Military College Sandhurst. Lieutenant, 1st West India Regiment, 1884; Indian Army, 1887; Captain 1895; Major 1902; Lt.-Col. 1909; Col. 1913; Brigadier-General 1918; served in 94th Russell's Infantry, 1889-1914, including 5 years as Commandant; A. A. and Q. M. G., 13th Division, 1914-15; on Gallipoli Peninsula, June to November 1915, at Cape Helles, Anzac (Battle of Sari Bair), Suvla Bay (Despatches). Commandant, Cadet College, Wellington, 1917-18, Defended Port Commander, Madras, 1918; Interpreter in Russian. Publications: Tropics and Snows, a narrative of travel and adventure; History of the Hyderabad Contingent; Wellington's Campaigns in India; The Revolt in Central India; The Mahratta and Pindari War; The First and Second Sikh Wars; Napoleon's Campaigns in Italy; The Campaign of Austerlitz; Napoleon's Invasion of Russia; articles on Big Game hunting and Natural History in the Journal of the Bombay Natural History Society, the Field, Land and Water, the Asian, etc., on Military History, biography and the art of war in many publications. *Address:* Fort St. George, Madras.

BUTLER, SIR (SPENCER) HARCOURT, K.C.S.I. *cr.* 1911; C.S.I., 1909; C.I.E., 1901; I.C.S.; Lieut.-Governor of U. P. of Agra and Oudh, since 1917; *b.* 1 Aug. 1869; *m.* 1894, Florence *d.* of F. Nelson Wright; *Educ.:* Harrow; Balliol College, Oxford. Served as Secretary to Famine Commission: Financial Secretary to Government; Director of Agriculture; Judicial Secretary to Government; Deputy Commissioner, Lucknow; Foreign Secretary to the Government of India; late Member of the Executive Council of the Governor-General; Lieut.-Governor of Burma, 1915–17. *Address:* Lieutenant-Governor's Camp, United Provinces.

BUTTERWORTH ALAN, C.S.I. 1915; Chief Secretary, Government of Madras, since 1914; Officiating 1st member, Board of Revenue, 1917. *m.* 1897, Alice Erksine, *d.* of Maj.-Gen. George Colclough, R.H.A.; *Educ.:* Elizabeth College, Guernsey, Wren's; Balliol College, Oxford. Entered I.C.S. 1883; served in various executive, judicial and administrative capacities in the Madras Presidency; also served in a judicial capacity in the Bombay Presidency and the Central Provinces. *Address:* Secretariat, Madras.

CADELL, PATRICK ROBERT, C.I.E., 1913; Indian Civil Service; *b.* 6 May 1871; *Educ.:* Edinburgh Academy; Haileybury; Balliol College, Oxford. Member of Oxford University Football XV., 1890-91; selected to play for South of England; service in India since 1891; served in Bombay Presidency and in Calcutta; Lieutenant-Colonel Commanding 15th Bombay Battalion, Indian Defence Force; Chief Secretary, Govt. of Bombay. *Address:* Byculla Club, Bombay.

CALVERT, LT.-COL. JOHN TELFER, I.M.S.; Principal and Professor of Medicine, Medical Hospital and College, Calcutta, *m.* Ethel B. *o. d.* of late A. Margetts of Wouldham; *Educ.:* St. Thomas's Hospital, M.B., Lond.; F.R.C.P., Lond.; D.P.H., Camb.; Fellow of and Dean of Faculty of Medicine, Calcutta University; President, Board of Health, Calcutta; Vice-President, State Medical Faculty of Bengal; Member, Bengal Council of Medical Registration; served in N.F.F. Expedition, Manipur (Medal with claps); N.W.F. Expedition (Tirah medal with two clasps). *Address:* Medical College, Calcutta.

CAMPBELL, LIEUT.-GENERAL SIR FREDERICK, K.C.B., *cr.* 1916; C.B., D.S.O., Commanding 1st (Peshawar) Division; *b.* 25 Feb. 1860; *m.* 1886, Eleanor Martha, *d.* of late J. Cannon; *Educ.:* Wellington College. Lieut. Royal Ayr and Wigton Militia, 1877-78; served with H. M. 40th Foot, 1879-82; Q.O. Corps of Guides, 1882-1899; A.A.G. Army Headquarters, India, 1906-08; commanded a Brigade, 1908-15; Hazara Expedition, 1888; Chitral Relief Force, 1895; North-West Frontier, India, 1897-98, Malakand operations in Bajaur and the Mamund Country, Utmankheyl; Buner Tibet, 1903-04; Colonel 40th Pathans, 1911; North-West Frontier, India, 1916, operations in the Mohmand, Swat and Buner countries. *Address:* Peshawar, N.W.F.P.

CARDEW, SIR ALEXANDER GORDON, K.C.S.I. *cr.* 1916, M.A., C.S.I., 1910; Member of Executive Council of Governor of Madras, 1914; Member of Madras Legislative Council since 1906; *b.* Bath, 1861, *m.* Evelyn Roberta, *d.* of late E. J. Firth. *Educ.:* Somersetshire College, Bath; Queen's College, Oxford (Scholar). Entered I.C.S. 1881, and served as Inspector-General of Prisons, 1892-99; Collector of Madras, and Chairman, Madras Harbour Board, 1900-1; Secretary to Madras Government in Legislative and Educational Departments, 1903-5; Secretary in Revenue Department, 1905-12; Chief Secretary, 1912-14. *Address:* Somerford, Madras; St. Margaret's, Ootacamund.

CAREY, BERTRAM SAUSMAREZ, C.S.I., 1914; C.I.E., 1893; V.D.; Commissioner of a District, Burma, since 1909; *b.* 1864; *m.* Mary, *e. d.* of late I. D. Chepmell. *Educ.:* Bedford Grammar School; appointed to Burma Police, 1886; to the Burma Commission, 1887; Political Officer in Chin Hills, 1889-95; Deputy Commissioner, 1900. *Address:* Rangoon, Burma.

CARMICHAEL, GEORGE, C.S.I. 1913; Member of Executive Council, Bombay; *b.* 25 March 1866; *m.* Mary Gertrude, *d.* of C. T. Glover, shipowner, Aberdeen; *Educ.:* Grammar School and University, Aberdeen; Balliol College, Oxford. Joined I.C.S. Bombay, 1886; Assistant Commissioner and Deputy Commissioner, Burma, 1889-94; Assistant Collector and Collector, Bombay, 1894-1909; Officiating Commissioner, Central Division, 1909. *Address:* Malabar Hill, Bombay.

CARTER, Frank Willington, C.I.E. 1915; C.B.E., 1918; Director of Turner, Morrison & Company Limited, Calcutta; *b.* 16 Jan. 1865; *m.* Mary widow of Commander Charles Collins *e. d.* of Rev. Dacres Oliver. *Educ.:* Cheltenham College. Articled to land agents in England and after farmed in Texas and California: joined the Basutoland Police in South Africa and came to India in 1891: joined the firm of Turner, Morrison & Co. in that year. *Address:* 6 Lyons Range or 7 Pretoria Street, Calcutta.

CAUMONT, Rt. Rev. Mgr. Fortunatus Henry, D.D., O.S.F.C.; 1st R.C. Bishop of Ajmer, since 1913; *b.* Tours, 10 Dec. 1871. *Educ.:* Tours. Took his vows, 1890; priest 1896; joined Mission of Rajputana, 1897; Military Chaplain of Neemuch, 1900, and of Mhow, 1901; Prefect Apostolic of the same Mission, 1903. *Address:* Bishop's House. Ajmer.

CHAMNEY, Lt.-Col. Henry, C.M.G. 1900; Principal Police Training College, Surdah; *b.* Shillelagh, co. Wicklow; *m.* 1st, 1907, Hon. Cecilia Mary Barnewall (*d.* 1908); *sister* of 18th Lord Trimleston; 2nd, 1913, Alice, *d.* of Col. W. E. Bellingham of Castle Bellingham, co. London. *Educ.:* Monaghan Diocesan School. Served South Africa, 1900 first as Major Commanding Lumsden's Horse and later with South African Constabulary: joined Indian Police, 1909; accompanied the relief column to Manipur in 1891. *Address:* Police Training College, Surdah, Rajshahi, Bengal.

CHANDAVARKAR, Sir Narayen Ganesh. Kt. *cr.* 1910; B.A., LL.B.; *b.* 1855. *Educ.:* Elphinstone Coll., Bombay. Became pleader of Bombay High Court, and for a time English Editor of Indu Prakash; General Secretary of the Indian National Social Conferences; Vice-Chancellor, University of Bombay, 1909-12; officiated as Chief Justice, June 1909 and June 1912; Judge of the Bombay High Court, 1901-1913; Chief Minister, Indore, 1913-14. *Address:* Pedder Road, Bombay.

CHAPMAN, Hon. Mr. Justice Edmund Pelly; Judge, High Court, Patna, since 1915; *b.* Calcutta, 16 August 1867; *m.* Mary Tupper *d.* of Major-General D. R. Cameron, C.M.G. *Educ.:* Clifton College; Emmanuel College, Cambridge. Served in Bengal; Assistant Secretary, Foreign Department, Govt. of India; Registrar High Court, Calcutta; Superintendent, Legal Affairs, and Secretary, Judicial Department, Government of Bengal; Judge, High Court, Calcutta, 1914-15. *Address:* High Court, Patna.

CHAPMAN, Ven. Percy Hugh, M.A., LL.D.; Archdeacon of Lucknow, and Chaplain Naini Tal, U. P., since 1912; *b.* 13 April 1866; *m.* 1898, Katharine Margaret, *d.* of Hon. Justice Sir George Knox, Puisne Judge, High Court, Allahabad. *Educ.:* Felsted Grammar School; King William's College, Isle of Man; Corpus Christi College, Cambridge, B.A. and M.A.; Trinity College, Dublin, M.A., LL.B., LL.D.; Priest, 1890; *Address:* Naini Tal, U. P.

CHARANJIT SINGH, Sirdar; chief of the Punjab; Fellow R. G. S.; member of Kapurthala royal family; *b.* 1883; *s.* of Kanawa Sochet Singh; *m. Educ.:* Jullunder, Chief College; Government College, Lahore. *Address* Charanjit Castle, Jullunder City, Punjab.

CHARKHARI STATE, H. H. Maharajadhiraj Sipahadar ul-mulk Ganga Singh Ju Deo Bahadur; *b.* 2 Nov. 1851; *S.* 1914. *Address:* Charkhari State, Bundelkund.

CHATTERJEE, Digambar, M.A., B.L.; Judge of the High Court at Calcutta, since 1909; *b.* Maliara, Bengal, 1 July 1857; *m.* 1870; *Educ:* Maliara M. V. School, Bankura Government School; Patna College, B. A.; Calcutta Presidency College, M. A., B. L. *Address;* 9-3, Hungerford Street, Calcutta.

CHATTERTON, Alfred, C.I.E. 1912, B. Sc., F.C.G.I., A.M.I.C.E., M.I.M.E., etc.; Director of Industries and Commerce in Mysore since 1912; *b.* 10 Oct. 1866; *m* 2nd, 1901, Alice Gertude, *d.* of W. H. Wilson; two *s.* one *d. Educ.*; Finsbury Technical College; Central Institution, South Kensington. Indian Educational Service, 1888; Director of Industries, Madras, 1908. *Address:* Bangalore.

CHAUBAL, Sir Mahadev Bhaskar, K.C.I.E., *cr.* 1917; C.S.I. 1911; B.A., LL.B.; *b.* Sept, 1857; *Educ.:* Government High School, Poona; Deccan College, Poona; Assistant Master, Elphinstone High School, Bombay, 1879-83; Vakil, High Court, Bombay, 1883; Acting Puisne Judge, High Court, Bombay, 1908: Member of the Executive Council of the Governor of Bombay, 1910-17 *Address:* Girgaum, Bombay.

CHAUDHURI, Hon. Mr. Justice Asutosh, Kt., *cr.* 1917; B.A. (Cantab.), M.A. (Calcutta University), Barrister-at-Law; Judge of the Calcutta High Court; *b.* Bengali, Brahmin, 1860: *m.* Prativa Devi, of the Tagore family of Calcutta. *Educ.:* St. John's College, Cambridge; Presidency College, Calcutta. After graduating in Calcutta went to Cambridge; admitted as an Advocate of the Calcutta High Court, 1886; President of the Bengal National Conference; founded the Bengal Land-holders Association in Calcutta one of the founders of the Calcutta National College; has always taken prominent part in reform movement in Bengal; first Hindu of the Calcutta Bar appointed Judge of the Court; now Senior Judge on original side of Calcutta High Court. *Address:* Ballygunge, Calcutta.

CHELMSFORD, 3rd Baron (U.K.), *cr.* 1858; Frederic John Napier Thesiger; P.C. 1916; K.C.M.G., *cr.*, 1906; G.C.M.G., *cr.* 1912; G.M.S.I., G.M.I.E. 1916; Viceroy of India since 1916; barrister; *b.* 12 Aug. 1868: *e. s.* of 2nd Baron Chelmsford and Adria Fanny *e.d.* of Maj.-Gen. Heath, Bombay Army; *m.* 1894, Hon. Frances Charlotte Guest, *d.* of 1st Baron Wimborne; one *s.* four *d. Educ.:* Winchester College; Magdalen College, Oxford; B.A. (1st class Law); M.A., 1892. Fellow of All Souls College, 1892-99; Member of London School Board 1900-4; of London County Council, 1904-05; Alderman, London County

Council, 1913; Governor of Queensland, 1905-9; Governor of New South Wales 1909-13; a Knight of Justice of St. John, Jerusalem, in England; late Chancellor of the Order of St. Michael and St. George. *Address:* Viceregal Lodge, Delhi.

CHHOTA UDEPUR, MAHARAWAL SHREE FATEHSINHJI, RAJAJI OF; *b.* 22 Oct. 1884; *S.* 1895: *m. sis.* of Maharaja of Rajpipla (*d.* 1914); *Educ.:* Rajkumar Coll., Rajkot. A Chown Rajput. Installed 12 March 1906. *Heir:* Prince Shree Natwarsinhji, *b.* 1907. Salute of 9 guns. *Address:* Chhota Udepur, Rewa Kantha Agency.

CHITNAVIS, SIR GANGADHAR MADHAV, K.C.I.E., C.I.E.; *b.* 1863; President, Nagpur, District Council since 1888; President, Nagpur Municipality, 1896-1918; selected to represent Central Provinces on Impl. Legislative Council, 1893-1895, 1898-99; President of C. P. and Berar Provincial Conference, 1906; additional member of Viceroy's Legislative Council, 1907-8; elected representative of landholders in the C. P. reformed Council, 1910-12; leading landholder in C. P. *Address:* Nagpur, Central Provinces.

CHITTY, SIR CHARLES WILLIAM, Kt., *cr.* 1916; Puisne Judge, High Court of Judicature, Calcutta, since 1907; *b.* 8th August 1859; *e. s.* of late General W. T. Chitty, Bombay Staff Corps; *m.* 1893, Helen Mary, *d.* of F. L. Latham, Gads Hill Place, Kent; *Educ.:* Eton (scholar); King's College, Cambridge (scholar); called to Bar, Inner Temple, 1884; practised at Bombay; Chief Judge of the Court of Small Causes, Bombay, 1891; officiated Judge of the Chief Court of Lower Burma, Rangoon, 1903; Additional Judge, Chief Court of the Punjab, Lahore, 1905. *Address:* 18 London Street, Calcutta.

CHOTA NAGPORE, BISHOP OF, since 1905, RT. REV. FOSS WESTCOTT, Bishop of the Diocese of Chota Nagpore, Bihar and Orissa; *b.* 23 Oct. 1863, *s.* of The Rt. Rev. B. F. Westcott (late Bishop of Durham) and S. L. M. Westcott. *Educ.:* Cheltenham College; Peterhouse, Cambridge. Curate of St. Peter's Church, Bishopwearmouth; joined the S.P.G. Mission, Cawnpore, 1889. *Address:* Bishop's Lodge, Ranchi.

CHRISTOPHERS, MAJOR SAMUEL RICKARD, M.B., C.I.E.; I.M.S. Member, Malaria Commission, Royal Society and Colonial Office, 1898-1902. *Address:* Malaria Bureau, Central Research Institute, Kasauli.

CHUNILAL VIJBHUCANDAS MEHTA, M.A., LL.B., J.P. Merchant and Mill-owner; *b.* 12th January 1881; *m.* to Tarabai Chandulal Kankodiwala. Educated at St. Xavier's College, Bombay. Captain, Hindu XI; Elected to the Bombay Municipal Corporation in 1907; Chairman Standing Committee 1912; President of the Corporation 1916; Elected to the Bombay Legislative Council by the Corporation in 1916; Elected to the City Improvement Trust, 1918, and Chairman of the Indian Merchants' Chamber, 1918. *Address:* 108, Ridge Road, Malabar Hill, Bombay.

CLEGG, HON. SIR ROBERT BAILEY, K.C.I.E I.C.S.; First Member, Board of Revenue an Commissioner of Land Revenue, Madras Additional Member of Legislative Council Governor of Madras; *b.* 28 Jan. 1865; *Educ* Manchester Grammar School; Balliol Colleg Oxford. Entered I.C.S., 1882. *Addres* Jarrett's Gardens, Egmore, Madras.

CLEVELAND, SIR CHARLES RAITT, K.C.I.E C.I.E., Director of Criminal Intelligenc India, since 1910; *b.* 1866; *m.* 1893, Mar Kathleen, *d.* of Col. T. W. Hogg. *Educ.* Christ's College, Finchley; Balliol Colleg Oxford. Entered I.C.S., 1885; Commissioner Excise, 1894; Deputy Commissioner, 1897 Inspector-General, Police, Central Province India, 1900; D.C.I., 1910; *Address:* Sim and Calcutta.

CLOGSTOUN, HERBERT CUNNINGHAM, C.I.E Guardian and Tutor to Maharaja Holkar Indore, Central India, 1905-1912; *b.* 24 Ja 1857; *Educ:* Wellington College. Beng Police, 1882; Special Service with Gover ment of Bengal, 1887-91; under Govt. India, Foreign Dept., at Ajmer, Dholpur, an Indore, 1891-1912.

CLOSE, HAROLD ARDEN, C.I.E., 1914; In pector-General of Police, N.W. Frontier Pr vince, since 1909; *b.* 13 Dec. 1863; *Educ* Cheltenham; Isle of Man. Joined Ind Police Dept., 1884; in Punjab first; N.W. Province, 1901; Superintendent, 1906; serve Black Mountain Expedition, 1891; Mohmar Expedition, 1908. *Address:* Peshawar.

COBB, HENRY VENN, C.S.I., C.I.E.; M. LL.M., Cantab.; Resident, Mysore, since 191 *Educ.:* King's School, Canterbury; Trini College, Cambridge. Arrived India, 188 served as Asst. Resident, Mysore; Asst. Co missioner and Commissioner, Ajmer, 1895-9 Asst. Resident, Kashmir, 1899-1900; Reside Jaipur, 1900-3; Gwalior, 1904-7; Jodhp and Western Rajputana States, 1908; offi ating as Agent to Gov.-Genl. for C. I., 190 Resident, Baroda, 1909-12; Kashmir, 191 1915. *Address:* The Residency, Bangalore.

COBDEN-RAMSAY, LOUIS EVELEIGH BA TREE, J.P., C.I.E., I.C.S.; Political Age Orissa Feudatory States, since 1905; *b.* Oct. 1873; *Educ.:* Dulwich College; Sidn Sussex College, Cambridge. Arrived India, 1897; Under-Secretary to Govt. Bengal in Revenue and General Dept., 1900- Registrar, Co-operative Credit Societies, 190 *Address:* Sambalpur, B.N. Railway.

COLE, LIEUT.-COLONEL HENRY WALTE GEORGE, C.S.I.; Deputy Commissioner, Assa Commission; Political Agent in Manipu 1914; *Educ.:* Wellington College; R.M. Sandhurst. Joined 5th Fusiliers, 1885; 2n Gurkhas, 1887; Asst. Commissioner, Assa 1891; Dy. Commissioner, 1901; Supdt., Lush Hills, 1906-11; Director, Temporary Work Delhi, 1912-13; served Hazara, 1888; Lush 1888-1889; Chin Lushai, 1889-92; N. Frontier, 1891. *Address:* The Residenc Manipur.

COLLINS, MARK, Ph.D ; University Professor of Sanskrit Philology, Madras University, since 1914 ; Professor of Sanskrit and Comparative Philology, Trinity College, Dublin, 1908-14. *Address :* The University, Madras.

COLVIN, SIR ELLIOT GRAHAM, K.C.S.I., C.S.I. ; Agent to Governor-General, Rajputana, and Chief Commissioner, Ajmer-Merwara, since 1905 ; *b.* 18 July 1861 ; *m.* 1888, Ethel. *e. d.* of Sir Steuart Colvin Bayley. *Educ.* : Charterhouse ; King's College, Cambridge. Entered I.C.S., 1882 ; Private Sec. to Lieut.-Gov. of Bengal, 1887 ; First Assistant Agent to Governor-General in Baluchistan, 1889 ; Settlement Commissioner, Alwar and Bharatpur, 1896 ; Political Agent, Eastern Rajputana States, 1897 ; Revenue and Judicial Commissioner, Baluchistan, 1897 ; General Superintendent, Thagi and Dakaiti, 1901 ; Resident in Kashmir, 1902. *Address :* Ajmer, Rajputana.

COOCH BEHAR, MAHARAJA BHUP BAHADUR OF, SIR JITENDRA, K.C.S.I. ; *b.* 20 Dec. 1886 ; *s.* of Maharaja Nripendra and Maharani Sunity Deire (*nee* Sen) ; *S.* brother 1913; *m.* 1913, *d.* of Gaekwar of Baroda ; *Educ.* : Eton; Imperial Cadet Corps. *Address :* Cooch Behar, Bengal.

COOK, ARTHUR WILLSTEED, C.I.E., I.C.S., B.A.; Magistrate and Collector, Bankura, Bengal, since 1911. *Educ.* : Portsmouth Grammar School ; Pembroke College, Oxford. Entered I.C.S., 1896. *Address :* Bankura, Bengal.

COOKSON, MAJ.-GEN. GEORGE ARTHUR, C.B., C.M.G. ; Cavalry Brigade Commander ; *b.* 6 Aug. 1860 ; *m.* 1898, Evelyn Sara, *d.* of late Horace Cockerell, C.S.I. ; *Educ.* : Wimbledon (Brackenbury's) School ; R.M.C., Sandhurst. Entered army, 1880 ; Bt. Lt.-Col., 29 Nov. 1900 ; Col., 1909, Lucknow Cavalry Brigade ; served N.-W. F., 1897-98 ; Tirah, 1897-98 ; South Africa, 1899-1902 ; European War; 1914-16. *Address :* Lucknow.

COPPEL, RT. REV. FRANCIS STEPHEN, R.C. Bishop of Nagpur, since 1907 ; *b.* Les Gets, Savoy, 5 Jan. 1867 ; *Educ.* : College of Evian ; University of France, Lyons B.A., B. Sc. Entered Congregation of Missionaries of St. Francis de Sales, Annecy ; Priest, 1890 ; sent to India for mission of Nagpur, 1892 ; for fifteen years attached to St. Francis de Sales College, Nagpur, as professor and principal. *Address :* Nagpur.

CORY, VEN. CHARLES PAGE, Archdeacon of Rangoon, since 1907 ; *b.* 16 June 1859 ; *Educ.* : Sedbergh School ; St. John's Coll., Cambridge (M.A.). Ordained 1883 ; Chaplain, Rangoon Cantonments, 1892-95 ; Thatyetmyo, 1895-99 ; Incumbent of Port Blair, 1901-3 ; Chaplain of Rangoon Cathedral, 1903-4 ; Rangoon Cantonments, 1904-5 ; Acting Archdeacon and Commissary, 1906-7 ; Maymyo, 1906-14. *Address* ; Maymyo, Burmah.

COSGRAVE, REV. WILLIAM FREDERICK, Principal, St. Paul's High School, Ranchi, since 1909 ; Hon. Canon of Durham ; *b.* Dalkey, Co. Dublin, 1857 ; a freeman of City of Dublin. *Educ.* : Kingstown School, Co. Dublin ; Trinity College, Dublin, M.A. and B. D. Ordained 1881. *Address :* Ranchi, Chota Nagpur.

COTTERELL, CECIL BERNARD, C.I.E., I.C.S. ; *Educ.* : St. Peter's School, York ; Ballio; College, Oxford. Entered I.C.S., 1898 ; has served in the Madras Presidency, since 1899, Deputy Commissioner, Salt and Abkari Dept.; 1905 ; Private Sec. to Governor of Madras, 1912-15. *Address* : Madras.

COUTTS, WILLIAM STRACHAN, C.I.E., I.C.S. ; Registrar of Patna High Court, Bihar. Barrister ; District and Sessions Judge, Bihar and Orissa, 1912. Puisne Judge, Patna High Court, 1918 ; *Educ.* : Dollar ; Trinity College, Cambridge. Entered I.C.S., 1895; Joint Magistrate, 1905. *Address :* High Court, Patna.

COVENTRY, BERNARD, C.I.E., 1912 ; Agricultural Adviser to Native States in Central India, since 1916 ; formerly Agricultural Adviser to Govt. of India, Director of Agricultural Research Institute, and Principal of Agricultural, College, Pusa, Behar ; *b.* 10 Dec. 1859 ; *Educ.* : Beaumont Coll. Came to India, 1881, and joined indigo industry ; started agricultural research station on modern lines, 1899; on foundation of Pusa Agricultural Research Institute and College, 1904, was made first Director and Principal ; acted as Insp. Gen. of Agriculture and became first Agricultural Adviser to Govt. of India ; retired 1916. *Address :* Indore, C.I.

COX, JOHN HUGH, C.I.E. ; Excise Commissioner, C.I., since 1906. *Educ.* : Clifton College ; Balliol College, Oxford. Entered I.C.S., 1888 ; Dy. Commissioner, 1903 ; Jt.-Sec., Board of Revenue, 1904. *Address :* Indore, C.I.

COX, VEN. LIONEL EDGAR, M.A. ; Senior Chaplain, St. George's Cathedral, Madras, and Archdeacon of Madras ; *b.* 28 March 1868 ; *Educ.* : Somerset College ; Bath ; Dorchester Theological College ; Durham University. Deacon, 1891 ; Priest, 1894 ; joined Madras Ecclesiastical Establishment, 1898 ; Archdeacon of Madras and Bishop's Commissary, 1910. *Address :* Cathedral, Madras.

COX, CAPTAIN WALTER HULBERT, D.S.O. I.M.S. ; Supdt., Burma Lunatic Asylum ; L.R.C.P. Ed. ; L.R.C.S. Ed. ; L.F.P.S. Glas. Medico-Psychological Certificate ; *b.* 9 Jan. 1875. Entered army, 1898 ; served China, 1900-1901 ; Mahsud-Waziristan Exp. *Address :* Rangoon.

CRADDOCK, SIR REGINALD HENRY, K.C.S.I. C.S.I. ; Lieut.-Governor of Burma, since 1917 ; *b.* 11 Mar. 1864 ; *s.* of late Surg.-Major William Craddock, 1st Goorkhas ; *m.* 1888, Frances Henrietta, *y. d.* of Gen. H. R. Browne, C.B. *Educ.* : Wellington ; Keble College, Oxford. Entered I.C.S., 1884 ; served in C.P. in various capacities, district and secretarial ; Chief Sec. to Chief Commissioner, 1900 ; Commissioner, 1902-7 ; Chief Commissioner, 1907-12 ; Home Member of Viceroy's Council, 1912-16. *Address :* Government House, Rangoon.

CRERAR, JAMES, M.A., C.I.E. (1917); Secretary to the Government of Bombay, Political, Judicial and Special Departments, *b.* 1877 ; *m.* to Evelyn, *d.* of the late Hon. Charles Brand. Educated at George Watson's College

Edinburgh, Edinburgh University and Balliol College (Oxon). Assistant Collector Sind; Manager of Encumbered Estates, Sind; Assistant Commissioner in Sind; Deputy Municipal Commissioner, Bombay; Municipal Commissioner, Bombay; Private Secretary to H. E. the Governor of Bombay. *Address:* The Secretariat, Bombay.

CRICHTON, Lt.-Col. Richmond Trevor, C.I.E.; Director of Surveys, Bengal, since 1900; *b.* 8 March 1865; *Educ.:* Edinburgh; R.M.C., Sandhurst. Entered 2nd Batt. H.L.I., 1884; Captain, I.S.C., 1895; Major, I.A., 1902; joined Survey Dept., 1889; Dy. Supdt.,1895; Supdt. of Settlement Surveys, 1895. *Address:* Survey Department, Calcutta.

CRIPPS, Col. Arthur William, C.B.; *b.* 16 Jan. 1862. Entered Army, 1882; Capt. I.S.C. 1893; Major I.A., 1901; Lt.-Col., 1908; Col 1913; served 1st Miranzai Expedition, 1891; Tirah, 1897-98; China, 1900; European War, 1914-16. *Address:* Army Headquarters.

CROSTHWAITE, Henry Robert, C.I.E.; Central Provinces Commissioner, since 1915; Registrar, Co-operative Credit Societies. Entered I.C.S., 1900. *Address:* Nagpur, C.P.

CRUMP, Harry Ashbrooke, C.S.I., B.A. (Oxon.); Financial Commissioner, C.P., since 1913; *b.* 1863; *Educ.:* Balliol College, Oxford. Joined I.C.S., 1885; served in C.P. as Asst. Commissioner, Commissioner of Excise, Dy. Commissioner; Chief Sec. to Chief Commissioner, 1901-2 and 1906-7; Offg. Chief Commissioner, 1912. *Address:* Nagpur, C.P.

CULLEN, Lt.-Col. Ernest Henry Scott, C.M.G., M.V.O., D.S.O.; 32nd Pioneers; *b.* 16 Nov. 1869. Entered Army, 1890; Lt.-Col., 1915; served Chitral, 1895; N.W.F., 1897-98; Tirah, 1897-98; Waziristan, 1902; Tibet, 1903, 4; Abor Expedition, 1912; European War (Mesopotamia), 1914-16. *Address:* Sialkot.

CURTIS, George Seymour, C.S.I.; Member of Executive Council, Bombay, since 1916; *Educ.:* Marlborough; Christ Church, Oxford. Entered I.C.S., 1888; Assistant Political Resident, Aden, 1889-91; Postmaster-General, Madras, 1897-1902; Director, Land Records, 1906. *Address:* Bombay.

DADABHOY, Maneckji Byramjee, C.I.E. *b.* Bombay, 30 July 1865; *Educ.:* Proprietary High School and St. Xavier's College, Bombay. Joined Middle Temple, 1884; called to Bar, 1887; Advocate of Bombay High Court, 1887; Government Advocate, Central Provinces, 1896; nominated to Viceroy's Legislative Council, 1908; elected to the Council, 1910 and 1914; President of All-India Industrial Conference, Calcutta, 1911, *Address:* Nagpur, C. P.

DALLAS, Lt.-Col. Charles Mowbray, C.S.I.; Commissioner, Punjab, 1911-16; *b.* 30 Aug. 1861; Entered Army, 1881; Major I.A., 1901; Lt.-Col., 1907; served Miranzai Expedition, 1891; Asst. Commissioner, 1887; Deputy Commissioner, 1897; Political Agent, Phulkiang States and Bahawalpur, 1905; Commissioner, Delhi, 1910.

DALY, Francis Charles, C.I.E.; Dy. Inspr. Genl. of Police, C.I.D., Bengal, since 1913; *b.* 22 March 1868; *Educ.:* Dedham Grammar School. Joined India Police Dept., 1887; Dist. Supdt., 1897; Offg. Dy. Inspector-General, 1908; on Special Duty, 1909-11; served Lushai Hills, 1891-1892.

DAS, Hon. M. S., C.I.E.; *b.* 28 April 1848. *Educ.:* Calcutta University; M.A., B.L., M.R.A.S., F.N.B.A. Represented Orissa in Bengal Legislative Council four times; Fellow of Calcutta University; elected by Legislative Council of Bihar and Orissa to Imperial Council, 1913; nominated to Legislative Council of Bihar and Orissa. *Address:* Cuttack, Orissa.

DAVID, Sir Sassoon (Jacob), 1st Baronet, *s.* of Jacob David, of Bombay; *b.* 11th, Dec. 1849; *Educ.* Bombay; Cotton Yarn Merchant and Mill Owner, and J.P., Sheriff 1905; Member of Bombay Improvement Trust Board, of Municipal Corporation, and of its Standing Committee, Promoter and Chairman of Bank of India, and Chairman and Director of several Cos.; was Chairman of Bombay Millowners' Association 1904-05, Member of Council of Governor-General of India, Kt. 1905; *m.* 1876, Hannah, *d.* of late Elias David Sassoon, *Address:* 7, Esplanade Road, Fort, Bombay.

DAVIDSON, Lt.-Col. James, D.S.O., M.D., M.A.; I.M.S.; *b.* 27 Nov. 1865; *Educ.:* Edinburgh Academy and University. Entered service, 1893; Lt.-Col. 1913; served Waziristan, 1894-95; Chitral, 1895; Suakin, 1896; Tirah, 1897-98; Tibet, 1903-4; Abor Expedition, 1912. *Address:* Dehra Dun.

DAVIDSON, Lionel, C.S.I.; Revenue Sec. to Govt. of Madras, since 1914. *b.* 19 Jan. 1868; *Educ.:* University College School; Balliol College, Oxford (M.A.). Entered I.C.S., 1886; Under-Sec. to Govt., 1896; Sec. to Land Revenue Comsrs., 1900; Comsr. and District Judge, Coorg, 1902; Collector and Magistrate, Madras, 1905; Sec. to Govt. and Member of Leg. Council, Madras, 1910; Member, Imp. Leg. Council, 1916; Actg. Chief Sec., Madras Govt., 1916. *Address:* Madras.

DE, Hon. Kiran Chandra, B.A., C.I.E., I.C.S.; Secretary to Govt. of Bengal, Gen. Dept., since 1915; *b.* Calcutta, 19 Jan. 1871; *Educ.:* Presidency College, Calcutta; St. John's College, Cambridge. Registrar of Co-operative Societies, also Fishery Officer, 1905; Magistrate-Collector, Rangpur, 1911; Member of Bengal District Administration Committee 1913; Press Censor, Bengal, 1914. *Address:* Cossipore, Calcutta; Brookeside, Shillong.

DE MONTMORENCY, Geoffrey Fitzhervey, C.I.E.; I.C.S.; Personal Assistant to Chief Commissioner, Delhi, since 1912; *b.* 23 Aug. 1876; *Educ.:* Malvern; Pembroke

College, Cambridge. Entered I.C.S., 1899; Depety Commissioner, Lyalpur, 1907; Settlement Officer, Chenab, 1909; Junior Secretary to Financial Commissioner, 1911; on special duty in connection with transfer of Capital to Delhi, 1912. *Address:* c/o Chief Commissioner, Delhi.

DENNYS, Lt.-Col. Sir Hector Ravers, K.B.E., C.I.E.; Indian army; Inspector General of Police, Punjab, since 1914; b. 9 Mar. 1864; *Educ.* Cheltenham. Entered army, Manchester Regt., 1885; Indian army, 1896; joined Punjab Police, 1888; Superintendent of Police, 1891; Deputy Inspector-General of Police, 1906. *Address:* The Park, Lawrence Road, Lahore.

DESIKACHARRY, Sir Vembakkam C., Kt., B.A., B.L., F.M.U.; Judge of the Court of Small Causes, Madras, since 1908; *b.* 29 Dec. 1861; *Educ.:* Presidency College, Madras. Additional Member, Madras Legislative Council, 1904-8; Fellow, Madras University, since 1903; sometime Vice-President, National Indian Association, Madras. *Address:* Padma Vilas Luz, Mylapore, Madras.

DEW, Lt.-Col. Armine Brereton, C.S.I., C.I.E.; Political Agent, Kalat, since 1912; *b.* 27 Sept. 1867; *Educ:* Wellington. Entered army, 1888; Indian army, 1899; served Hazara Expedition, 1891; attached to Gilgit Agency, 1894; joined Political Department, 1897; Political Agent, Gilgit, 1908-12. *Address:* Mastung, Baluchistan.

DHRANGADHRA, H. H. Maharana Shree Ghanshyamsinghji; *b.* 1891; *S.* father 1911. *Educ.:* in England with private tutors under guardianship of Sir Charles Ollivant. *Address:* Dhrangadhra, Kathiawar.

DICK, Hon. George Paris, C.I.E.; Bar.-at-law; Member of C. P. Legislative Council, 1917; Govt. Advocate, C. P.; *b.* 1866; *Educ.:* Dulwich College. Called to Bar, Middle Temple, 1889; Advocate of Calcutta High Court, 1893; of the Judicial Commissioner Court, Nagpur, 1891; Lecturer in Law to the Morris College, Nagpur. *Address:* The Kothi, Nagpur.

DIGBY, Everard, B.Sc. (Lond.) 1900; Manager, Calcutta Associated Press of India; Editor, Indian Ink; *b.* Plymouth, 10 July 1882. *Educ.:* Quernmore, Kent. Joined "Western Daily Mercury", Plymouth; afterwards in London; editor, "Indian Daily News," Calcutta, 1907-11; was Calcutta correspondent, Tribune, London; Represented Calcutta at Imperial Press Conference, London, 1909. *Address:* 1 Garstin's Place, Calcutta.

DINAJPUR, Maharaja Sir Girijanath Ray, Bahadur of, K.C.I.E.; *b* 1860; *s.* by adoption to Maharaja Traknath Ray and Maharani Shyammohini of Dinajpur; *m.* 1876. *Educ.:* Queen's College, Benares. Member, E. B. and Assam Leg. Council, 1906-11; Vice-President, B. I. Association, Calcutta; former President, E. B. Landholders' Association. President, Dinajpur Landholders' Association; Member, E. I. Association, London; Asiatic Society, Bengal; Calcutta Literary Society; Bangiya Sahitya Parisat. *Heir:* Maharaja Kumar Jagadishnath Ray. *Address:* Dinajpur Rajbati, Dinajpur; 43 Wellesley Street, Calcutta.

DOBBS, Henry Robert Conway, C.S.I., C.I.E., F.R.G.S.; I.C.S.; *b.* 26 Aug. 1871; *Educ.:* Winchester College; Brasenose College, Oxford. Entered I.C.S., 1892; in Political Service in Mysore and Baluchistan, 1899-1901; investigated navigation of Euphrates from latitude of Aleppo to Baghdad, 1902-3; Consul for Seistan and Kain, 1903; British Commissioner, Russo-Afghan Boundary, 1903-4, during which period was on duty at Herat and neighbourhood; traversed unexplored tract of Hazarajat between Herat and Kabul, 1904; returned to Kabul as Secretary to Kabul Mission, 1904; Famine Commissioner, Rajputana, 1905; Dy. Sec., Foreign Dept., 1906; Resident and Consul-General, Turkish Arabia, Oct. 1914; Political Officer with Mesopotamian Force supervising Civil Administration of Territories in British Occupation, Jan. 1915-Aug. 1916; Revenue and Judical Commissioner, Baluchistan, Apr. 1917. *Address:* Quetta.

DONALD, Douglas, C.I.E.; Commandant, B.M. Police and Samana Rifles; *b.* 1865; *Educ.:* Bishop Cotton School, Simla. Joined the Punjab Police Force at Amballa, 1888; transferred to Peshawar, 1889; appointed C.B.M. Police, Kohat, 1890; served Miranzai Expeditions, 1891, on Samana posts and Tirah, re-transferred to Kohat, 1899; on special duty to raise Samana Rifles. *Address:* Military Police, Kohat.

DONALD, Hon. Sir John Stuart, K.C.I.E., C.S.I., C.I.E.; *b.* 1861; *Educ.:* privately; Bishop Cotton School, Simla. Appointed Extra Assistant Commissioner, 1882; Assistant Comm issioner, 1890; promoted for service in Gomal Pass and with Sherani Expedition in charge of Gomal Pass, 1890-93; accompanied mission to Kabul under Sir H. Durand, 1893; on special duty N.W. Frontier, and British Commissioner for Demarcation of Kurram-Afghan boundary, 1894; Political Agent of the Tochi, and Deputy Commissioner of Bannu, 1899-1903; served Mahsud-Wazirs; Chief Political Officer with force against Kabul Khel Wazirs and Gumati, 1902; British Representative on Indo-Afghan Commission, 1903; Resident in Waziristan, 1908; British Commissioner Anglo-Afghan Commission for Settlement of Border Disputes, 1910; Chief Commissioner and Agent to the Governor-General in the N.W. Frontier Province, 1913-15; appointed an Additional Member of the Imperial Legislative Council of India, 1916. *Recreations:* big-game shooting, golf. *Club:* East India United Service.

DORNAKAL, Bishop of (and Assistant Bishop of Madras), since 1912; Rt. Rev. Vedanayakam Samuel Azariah (1st native bishop in India); *b.* 17 Aug. 1874; *Educ.:* C. M. S. High School, Mengnanapuram; C.M.S. College, Tinnevelly; Madras Christian College. One of founders of Indian Missionary Society of Tinnevelly, 1903; Hon. Secretary, 1903-9; Hon. Gen. Secretary of National Missionary Society of India, 1906-9; visited Japan as Delegate of World Student Christian Federation, 1907, and its Vice-President, 1909-11;

visited England as Delegate to World's Missionary Conference, 1910; Head of Dornakal Mission, 1909-12. *Address:* Dornakal.

DRAKE-BROCKMAN, Sir Henry Vernon, Kt., M.A., LL.M.; Barrister-at-law; Judicial Commissioner, Central Provinces, since 1906; *b.* Madras, 8 Nov. 1865; *m.* 1888, I. M., *d.* of A. G. Faichnie, Deputy Postmaster-General, C.P. and Berar. *Educ.:* Charterhouse; St. Peter's College, Cambridge. First-class Law Tripos, 1886; went to India, 1886; Under-Secretary to the Chief Commissioner, C.P., 1890 and 1892; Commissioner of Excise, 1892-94; Deputy Commissioner, Wardha, 1895; Divisional and Sessions Judge, Nerbudda, 1896-1901; Deputy Commissioner, Raipur, 1901-3; officiated as Judicial Commissioner, 1903, 1905 and 1906. *Address:* Nagpur, C.P.

DU BOULAY, Sir James Houssemayne, K.C.I.E., C.I.E., C.S.I.; *b* 1868; *s.* of late Rev. J. T. H. Du Boulay, Housemaster at Winchester; *m* 1901, Freda Elais, *d* of Alfred Howell. *Educ.:* Winchester; Balliol College, Oxford. Entered I.C.S., 1889; Deputy Municipal Commissioner on Plague Duty, Bombay, 1897-1900; acted as Private Secretary to Lord Northcote, Governor of Bombay, 1901; to Lord Lamington, Governor of Bombay, 1903-7; Secretary to Government, Bombay, 1909; Private Secretary to Viceroy (Lord Hardinge), 1910-16; Secretary to Govt. of India, Home Department, 1916. *Address:* Simla

DUMAYNE, Sir Frederic George, Kt.; Vice-Chairman to Commissioners for Port of Calcutta, since 1901; *b.* 1852; *s.* of late Thomas Dumayne of Milford, S. Wales. *Educ.:* King James' Grammar School, Paisley, N.B. For many years Secretary to trustees of Port of Bombay; member of Bengal Legislative Council, 1910; Director, Bank of Bengal and Vice-President in 1911. Member of Board of Calcutta City Improvement Trust, and Member of Waterways Committee. *Address:* Port Commissioners House, Kolia Ghat Street, Calcutta.

DUNDAS, Robert Thomas, C.I.E.; Inspector-General of Police, Bihar and Orissa, since 1914; additional Member of Lieut.-Governor's Council. *Address:* Bihar.

DUTT, Calica Doss, B.L., Rai Bahadur, C.I.E.; retired; *b.* 1841. *Educ.:* Krishnaghur Collegiate School; Calcutta Presidency College. Appointed Moonsiff and then Deputy Magistrate and Deputy Collector under Bengal Govt., 1861; Dewan of Coach Behar, 1869; Retired, 1911. *Address:* Bowbazar, Calcutta.

EBRAHIM, Sir Currimbhoy, 1st Baronet; *s.* of late Ebrahimbhoy Pabaney, Shipowner; *b.* Oct. 25, 1839; sometime a Trustee of Port of Bombay, and Pres. of the Anjuman-i-Islam and of Mahomedan Educational Conference in Bombay; leading member of the Khoja community; J.P.; of Bombay, Vice-Pres. of All India Moseem League, Merchant and Millowner; interested in many charitable institutions; Kt. 1905; *m.* 1st, 1854, Foolbai, *d.* 1875, *d.* of Assobhai Ganji of Bombay; 2ndly, 1876, Foolbai, *d.* of Vishram Sajan of Bombay. *Address:* Pabaney Villa, Warden Road, Bombay.

EESTERMANS, Dr. Fabian Anthony, O.C., Catholic Bishop of Lahore, since 1905; *b.* Belgium, 1858. *Educ.:* Episcopal Seminary, Hoogstraten; studied Philosophy at Mechlin; joined the Capuchin Order at Enghien, 1878; ordained Priest, 1883; Professor in Apostolic Seraphic School at Bruges, 1885-9; came to India, 1889. *Address:* Lawrence Road, Lahore.

EGERTON, Sir Brian, K.C.I.E., C.I.E.; In H.H. Nizam's service; *b.* 1857; *s.* of late Major-General C. R. Egerton. *Educ.:* Cheltenham College. Entered Punjab Police, 1879; served Afghan War, 1880-81. *Address:* Secunderabad Deccan.

ELIOTT, Lt.-Col. Francis Harding, C.S.I., I.A.; Commissioner, Irrawaddy Division, Burma, since 1911; *b.* 1862. *Educ.:* Harrow. Entered army, 1881; joined Indian Army, 1885; Burma Commission, 1888; Lt.-Col., 1907; served Burma, 1888-9. *Address:* Irrawaddy Division, Burma.

EVANS, Col. George Henry, C.I.E., F.L.S.; Superintendent Civil Veterinary Department, Burma; *b.* 1863; *Educ.:* Rathmines School, Dublin; Royal Veterinary College, London. Entered Army Veterinary Dept., 1884; Lt.-Col, 1908; Colonel, 1913; served with Chin-Lushai Exp., 1889-90. *Address:* Tank Road, Rangoon.

EVERSHED, John, F.R.S., F.R.A.S.; Director, Kodaikanal and Madras Observatories since 1911; *b.* 1864. Assistant Director, Kodaikanal and Madras Observatories, 1906; discovered radial movement in sunspots, 1909; visited New Zealand to select site for Cawthron Observatory, 1914; undertook astronomical expedition to Kashmir, 1915. *Address:* The Observatory, Kodaikanal.

EWING, Rev. J. C. R., M.A., D.D., LL.D., C.I.E.; Principal, Forman Christian College, Lahore; Vice-Chancellor, Punjab University, since 1910; *b.* Pennsylvania, U.S.A., 23 June 1854. *Educ.:* Washington and Jefferson, U.S.A. Came to India, 1879. *Address:* Lahore.

FAGAN, Patrick James, C.S.I., I.C.S.; Financial Commr., Punjab, since 1910; Member of Council of Lt.-Gov. *Educ.:* Blundell's School, Tiverton; St. John's College, Cambridge. Entered I.C.S., 1895. *Address:* Lahore.

FAIRBROTHER, Col. William Tomes, C.B., F.R.G.S.; I.A.; *b.* 1856; Entered army, 1875; Lt.-Col., I.A., 1901; Brevet-Col. 1904; served Afghan War, 1878-80; Sikkim Exp., 1888, N.E. Frontier, Assam, 1894; Chitral 1895; Waziristan, 1901-2; was Commandant 13th Rajputs, 1898-1905. *Address:* Bareilly; Srinagar.

FAIYAZ ALI KHAN, Nawab, Sir Mumtazud-Dowlah, Mahomed, of Pahasu, K.C.V.O. K.C.I.E., C.S.I.; Prime Minister at Jaipur *b.* 1851; *s.* of late Nawab Sir Faiz Ali Khan; Bahadur. Served for fourteen consecutive

terms on U. P. Leg. Council and for two years on Imp. Council; President of Board of Trustees, M.A.O. College, Aligarh; trustee, Government College, Agra, Lady Dufferin Fund, etc. *Address:* Nawab's House, Jaipur, Rajputana;

FANE, MAJ.-GEN. VERE BONAMY, C.B., C.I.E., I.A.; Brig.-Gen. commanding Bannu Brigade; F.R.G.S.; *b.* 1863. *Educ.:* Privately; Woolwich, Entered army from Militia 1884; Joined, I. A. 1888; served Waziristan, 1894-95; Tochi F. F. 1897-98; A.A.G. 1st Brigade China, 1900: D. A. Q. M. G. Cavalry Brigade, China, 1901-02, Chief of Police; N.W.F., 1908; Mohmand, commanded at action near Dirdoni, Tochi, 26 March 1915. *Address:* Simla and Calcutta.

FAREWELL, COMMANDER MICHAEL WARREN, C.I.E.; Marine Transport Officer and Port Officer, Karachi, since 1914; *b.* 1868. *Educ.:* Somersetshire College, Bath; The Conway Liverpool. Sub-Lieut., R.I.M., 1890; at R.N.C., Greenwich, 1893-94; Lieut. 1895; Commander, 1906; commanded Lawrence, Canning, Mayo, Minto, Hardinge, Dalhousie; employed in connection with gun-running operations in command R.I.M.S. Hardinge. 1910; Deputy Conservator, Madras, 1910-13. *Address:* Manore, Sind.

FARIDKOT, H. H. BARAR BANS RAJA BALBIR SINGH BAHADUR, RAJAH OF; *b.* 1870; *S.* father 1898. Rules the one of Sikh States of the Punjab. *Address:* Faridkot, Punjab.

FARIDOONJI JAMSHEDJI, NAWAB SIR FARIDOON JUNG FARIDSON DAULA BAHADUR, K.C.I.E., C.S.I., C.I.E.; Assistant Minister, Political Department Nizam's Government; *b.* 1849; *Address:* Saiabad, Hyderabad, Deccan.

FATEH ALI-KHAN, HON. HAJEE, NAWAB KIZILBASH, C.I.E.; *b.* 1862. *S.* to headship of Kizilbashes, 1896. Placed himself and his great clan at disposal of Government for Chitral campaign, and induced many of tribes across border to adopt attitude of pacific non-intervention. For this service, received 3,000 acres of land in Chenab Canal Colony for settlement of his followers; has served on Punjab Legislative Council; representative of Punjab at Famine Conference, 1897; Life President of Anjumani-Islamia, Lahore, and Imamia Association of Punjab; a Counsellor of Aitchison Chief's College, Lahore; Fellow of Punjab University; Trustee of Aligarh College; *Heir: s.* Nisor Ali Khan. *Address:* Aitchison Chiefs' Coll., Lahore.

FELL, GODFREY BUTLER HUNTER, C.S.I., C.I.E.: Financial Adviser. Military Finance Dept. Govt. of India, since 1915; *b.* 1872; Fellow of Magdalen College, Oxford; *m.* 1904, Janet Camilla, *o. d.* of Gen. Sir D. J. S. McLeod. *Educ.:* Eton; Magdalen College, Oxford. Entered I.C.S., 1894; Under Sec. to Burma Govt., 1899; Private Sec. to Lieut.-Gov., 1903; Depy. Sec., Home Dept., Govt. of India, 1906-09.

FERARD, HENRY CECIL, B.A., C.I.E.; Commissioner, Allahabad Division; *b.* 1864. *Educ.:* Eton; University College, Oxford. Entered I.C.S., 1885; and posted to N.W.P. and Oudh. *Address:* Allahabad.

FFRENCH-MULLEN, MAJOR JOHN LAWRENCE WILLIAM, C.I.E.: Commandant, Myitkyina Gurkha Rifle Battalion, Burma Military Police; 13th Duke of Connaught's Lancers (Watson's Horse), I.A.; *b.* 1868; *Educ.:* The Oratory School, Edgbaston. Joined army, 1887; I.A., 1889; served Kachin Hills, 1893; commanded Military Police Escort to the Burma China Boundary Commission, 1898, 1900; commanded Military Police Column which entered Pienma, N.E.F., 1910. *Address:* Myitkyina, Upper Burma.

FILOSE, LT.-COL. CLEMENT, M.V.O.; Military Sec. to Maharaja of Gwalior, since 1901; *b.* 1853. *Educ.:* Carmelite Monastery, Clondalkin; Carlow College. Entered Gwalior State service, 1872; Lt.-Col. 1903; Assistant Inspector-Gen., Gwalior Police and General Inspecting Officer, 1893-97; A. D. C. to the Maharaja Scindia, 1899-1901. *Address:* Gwalior.

FIRMINGER, VEN. WALTER K. F.R.G.S.; Archdeacon of Calcutta, since 1914; Editor of the Indian Churchman, 1900-05; Chaplain on Indian Establishment; *b.* 1870; *Educ.:* Lancing and Bury St. Edmunds; Merton Coll., Oxford., B.D., M.A.; Honour School of Modern History. Ordained Deacon at Hereford, 1893; Priest in Mombasa, 1895; Sub-dean of Zanzibar, 1896; present at bombardment. *Address:* St. John's House, Calcutta.

FLETCHER, HON. ERNEST EDWARD, Judge of High Court, Calcutta, since 1907; *b.* 25 May 1869; *Educ.:* Queen's College, Oxford; B.A., 1890. Called to Bar, Lincoln's Inn, 1892. *Address:* Calcutta.

FOULQUIER, RT. REV. EUGENE CHARLES, Vicar Apostolic of Northern Burma and titular Bishop of Corydallus, since 1906; *b.* 1866. *Address:* Mandalay.

FOX, SIR CHARLES EDMUND, Kt., K.C.S.I., *cr.* 1917; Chief Judge, Chief Court, Lower Burma, since 1906; *b.* 1854: *Educ.:* Prior Park College, Bath. Called to Bar, 1877; Government Advocate, Burma, 1884-1900; Judge of Chief Court, 1900. *Address:* Rangoon.

FRASER, SIR HUGH STEIN, KT., Partner in firm of Gordon Woodroffe of Madras; *b.* 5 March 1863; *m.* 1904, Fanny Lousie, *d.* of late John Bisdee Fawcett. *Educ.:* Blackheath Proprietary School; Rugby. A Member of Madras Port Trust for several years; additional Member of Council, Madras, 1910, 1911, 1914, 1915; Chairman, Chamber of Commerce, Madras, 1910, 1911, 1914; Director of Bank of Madras; Sheriff of Madras, 1915. *Address* Madras.

FRENCH, LEWIS, C.I.E., Secretary to Punjab Govt., since 1916; *b.* 26 Oct. 1873; *Educ.:* Merchant Taylors' School; St. John's College, Oxford. Assistant Commissioner, Punjab 1897; Colonisation Officer, Chenab Colony,

1904-06; Director, Land Records, 1906, Director, Agriculture, 1907; Deputy Commissioner, Shahpur, 1908; Chief Minister, Kapurthala State, 1910-15; Special Commissioner, Defence of India Act, 1915; Director, Land Records, 1915. *Address:* Lahore.

FYSON, PHILIP FURLEY, B.A. (Cantab.), F.L.S.; Professor of Botany, Presidency Coll., Madras, since 1904. *Educ.:* Loretto School; Sidney Sussex College, Cambridge; Science Master, Aldenham Grammar School, 1901-2; Assistant to Professor of Botany, Univ. Coll., Aberystwyth, 1902-3. Assistant at Aynsom Agricultural Station, 1903-4. *Address:* Basbat, Teynampet, Madras

GAGE, ANDREW THOMAS, M.A., B.Sc., M.B., F.L.S.; Major, I.M.S.; Director, Botanical Survey of India; Supdt., Royal Botanic Gardens, Calcutta, since 1906; *b.* 1871; *Educ.:* Grammar School, Old Aberdeen; University of Aberdeen; Assistant to Professor of Botany, University of Aberdeen, 1894-96; entered I.M.S., 1897; Curator of Herbarium, Calcutta Botanic Gardens, 1898. *Address:* Royal Botanic Gardens, Calcutta.

GALES, SIR ROBERT RICHARD, Kt., F.C.H., M.Inst. C.E., M.Am. Soc. C.E.; Agent, North-Western Railway, since 1917; *b.* 31 Oct. 1864. *Educ.:* privately; Royal Indian Engineering College, Coopers Hill. Appointed to Railway Branch of the Indian P. W. D., 1886; on arrival in India in 1887 was employed on various projects in Punjab; appointed Assistant-Manager, North Western Railway, 1895, and subsequently Assistant Manager, East Coast Railway, and Deputy-Manager, Eastern Bengal Railway; Engineer-in-Chief, Curzon Bridge over the Ganges at Allahabad, 1903; after conducting reconnaissance of Bombay Sind Railway Connection became Engineer-in-Chief, Coonoor Ootacamund Railway, 1906; Engineer-in-Chief of Hardinge Bridge over Lower Ganges at Sara, 1908; Chief Engineer with Railway Board, Govt. of India, 1915-17. *Address:* Lahore.

GANGA RAM, C.I.E., M.V.O., Rai Bahadur, M.I.M.E., M.I.C.E.; *b.* 1851; *Educ.:* Thomason College. Entered P. W. D. 1873-Executive Engineer 1883; Supdt., Coronation; Durbar Works, Delhi, 1903; retired, 1903; Supdtg. Engineer, Patiala State; retired, 1911; Consulting Engineer, Delhi Durbar, 1911. *Address:* Lahore.

GEORGE, EDWARD CLAUDIUS SCOTNEY, C.I.E.; Dy. Commissioner, Ruby Mines, Burma; *b.* 1865; *Educ.:* Dulwich College. Asst. Commissioner, 1887-90; Officiating Dy. Commissioner, Bhamo, 1890-97; Sub-Commissioner, Burmo-China Boundary Commission, 1897-99. *Address:* Ruby Mines, Burma.

GHOSAL, MRS. (SRIMATI SVARNA KUMARI DEVI); *d.* of Maharshi Debendra Nath Tagore, and sister *of* Sir Rabindranath Tagore; *b.* 1857; *m.* late J. Ghosal, Zemindar. Before twenty published a novel anonymously; soon after became editor of Bharti (first woman editor in India), a Bengali magazine which she still conducts. *Address:* Old Ballygunge Road, Calcutta.

GHOSE, SIR CHUNDER MADHUB, Kt.; late Senior Puisne Judge, High Court, Calcutta, 1885-1906; President (Hon.) of Board of Examiners of Candidates for Professional Pleadership and Mukhtearship, 1898-1906; *b.* 1838; *Educ.:* Hindu College; Presidency College, Calcutta University (Fellow). Govt. Pleader, Burdwan, 1860-6; Member of Bengal Legislative Council, 1884; President of Faculty of Law, Calcutta University, for three years; officiating Chief Justice at Bengal, 1906; took actve part (President, 1905) in the establishment of Bengal *Kyasht Shabha:* President, Indian Social Conference, 1906; retired, 1907: *Address:* Bhowanipore, Calcutta.

GHOSE, SIR RASHBEHARY, Kt., C.S.I., M.A., D.L., C.I.E.; Member, Viceregal Council. *b.* 1845. *Educ.:* Presidency College, Calcutta. D.L. 1884. Tagore Law Professor, Calcutta University, 1876. Fellow, 1879; Member of Bengal Leg. Council, 1888-91. Imp. Council, 1891-94; re-nominated, 1906. *Address:* Sans-Souci, Alipore.

GIBBES, REGINALD PRESCOTT, Govt. Emigration Agent for all British Colonies at Calcutta, since 1914. *b.* 1867. *Educ.:* St. Edward's School, Oxford. Germany; France; Italy; Spain. Entered Col. C. S., 1889; Cadet, Straits Settlements, transferred to Calcutta, 1900, as Assist. Emigration Agent for Trinidad, Fiji, Jamaica, and Mauritius. Emigration Agent, 1903. *Address:* 61 Garden Reach, Calcutta.

GIBBONS, THOMAS CLARKE PILLING, K. C.; Advocate-General, Bengal, since 1917. *b.* 1868. Admitted a Solicitor, 1891; called to Bar, Inner Temple, 1897. *Address:* 2 Mitre Court Buildings, Temple, E. C.; High Court, Calcutta.

GIDHOUR, MAHARAJ KUMAR CHANDRA MOULESSHUR PRASAD SING; *S. & H.* of Maharaja Sir Ravneswar Prasad Sing Bahadur of Gidhour. *b.* 1890. *m.* 1913. Member, District Board; Vice-Chairman, Local Board. *Address:* Gidhour, Monghyr, Behar.

GIDHOUR, MAHARAJAH SIR RAVNESWAR PRASAD SINGH, BAHADUR OF, K.C.I.E.; premier nobleman in Bihar and Orissa. *b.* 1860. *m.* 1886. Member of Bengal Leg. Council, 1893-95 and 1895-97. 3rd time, 1901-03; 4th time, 1903. Life Vice-President. B.L. Association; title of Maharajah Bahadur made hereditary, 1877. Hon. Member of Leg. Council of new Province, 1913. *Address;* Gidhour, Monghyr, Behar.

GIFFARD, LT.-COL. GERALD GODFRAY, C.S.I., M.R.C.P., M.R.C.S; Professor, Midwifery, Medical College, Madras, since 1906. Supdt., Govt. Maternity Hospital, Madras. *b.* 1867. *Educ.:* St. Bartholomew's Hospital. Captain I.M.S., 1890. Lt.-Col., 1910. Resident Surgeon, General Hospital, Madras, 1897. Sanitary Officer Chingleput, 1899. Professor, Materia Medica, Madical College, 1901. Professor, Surgery, 1903. Served European war, Commpanant, Hospital-ship Madras, 1915-17. *Address:* Govt. Maternity Hospital, Madras.

GILLAN, Sir Robert Woodburn, K.C.S.I., C.S.I.; *b.* 1867; *m.* 1889, Mary *o. d.* of Wm. van Bearle. *Educ.*; Ayr.: Christ's College, Cambridge. Joined I. C. S., 1888; attached to U. P., filling executive and chiefly revenue posts. Sec. to the Board of Revenue, 1902; Fin. Sec. to Govt., 1907. Comptr. and Aud. Gen., 1910. Fin. Sec. to the Govt. of India, 1912. Member of Royal Commission on Indian Finance and Currency, 1913. Member, Railway Board, 1914, and President, 1915. *Address:* Simla and Delhi.

GILLMAN, Herbert Francis Webbe, C.S.I., I.C.S.; Ord. Member of Madras Leg. Council; Collector and Magistrate Madras since 1907. *Educ.:* Dulwich College; Emmanuel College, Cambridge. Entered I.C.S., 1886. District and Session Judge, 1905. *Address:* Madras.

GLANCY, Reginald Isidore Robert, C.I.E.: Asst. Min. of Fin., H. H. Nizam's Govt.; since 1911. *Educ.*: Clifton College; Christ Church, Oxford. Entered I. C. S., 1896; Settlement Officer, Bannu, 1903. Political Agent, 1907. First Asst. Resident, Hyderabad, 1909. *Address:* Hyderabad.

GLANVILLE, Brig.-Gen. Francis, D.S.O.; Commanding Bareilly Brigade, I. A.; *b.* 1862; Entered R. E., 1881; Bt.-Col., 1909; Col., 1911; Brig-Gen., 1916; served Burma, 1886-88. *Address:* Bareilly.

GODLEY, John Cornwallis, C.S.I.; Director of Pub. Inst., Punjab, and Member of Prov. Leg. Council; *b.* 1861; *Educ.:* Marlborough; Corpus Christi College, Oxford. *Address:* Lahore.

GOLDSMITH, Rev. Malcolm George, Missionary of C.M.S. in Madras and Hyderabad, Deccan; *b.* 1849; *Educ.:* Kensington Proprietary Grammar School; St. Catherine's College, Cambridge. Ordained, 1872; C.M.S. Missionary, Madras, 1872-73; Calcutta, 1874-75; Principal, Harris School, Madras, 1883-91; Hyderabad, 1891-99; Hon. Canon, St. George's Cathedral, Madras, 1905. *Address:* Royapet House, Royapettah, Madras.

GONDAL, His Highness Thakore Saheb of Bhagwat Sinhjee, G.C.I.E.; K.C.I.E., *b.* 1865; *s.* of late Thakore Saheb Sagramji of Gondal; *m.* 1881, Nandkuverba, C. I., *d.* of H. H. Maharana of Dharampore. *Educ.:* Rajkumar Coll., Rajkot; Edin. Univ. Hon. LL. D. (Edin.) 1887; M. B. and C. M. (Edin.) 1892; M.R.C.P. (Edin.) 1892; D. C.L. (Oxon). 1892; M. D. (Edin.) 1895; F.R.C.P. (Edin.) 1895; F.C.P. and S. B. 1913; Fellow of University of Bombay, 1885; F.R.S.E., 1909; M.R.A.S., M.R.I. (Great Britain and Ireland). *Publications:* Journal of a Visit to England; A Short History of Aryan Medical Science. *Address:* Gondal, Kathiawar.

GORDON, Francis Frederick, proprietor and editor of *Advocate of India* and Maratti journal *Jagad-Vritta*; *b.* 1866. Went to India on literary staff of *Bombay Gazette*, 1890; purchased *Advocate of India*, 1894. *Address:* *Advocate of India*, Bombay.

GOURLAY, William Robert, C.I.E.; I.C.S; Priv. Secy. to Gov. of Bengal, since 1912; *b.* 1874; *Educ.:* Glasgow University; Jesus Coll., Cambridge. Ent. I.C.S., 1897; served in Bengal and Bihar; Registrar of Co-operative Credit Societies, 1905; Director of Agriculture, 1907; Magistrate and Collector, 1912. *Address:* Govt. House, Calcutta.

GRAHAM, Rev. John Anderson, M.A., (Edin) D.D. (Edin.), C.I.E.; Missionary of Church of Scotland, at Kalimpong, Bengal, since 1889; Hon. Supdt. of St. Andrew's Colonial Homes; *b.* 1861; *Educ.:* Cardross Parish School; Glasgow High School; Edinburgh University. Was in Home C.S. in Edinburgh, 1877-82; graduated, 1885; ordained, 1889. *Address:* Kalimpong, Bengal.

GRANT, Alfred Hamilton, C.S.I., C.I.E.; Ch. Commr. N. W. F. Province, 1919; *b.* 1872; 2nd *surv. s.* of late Sir Alexander Grant, 10th Bart. of Balvey, and *heir-pres.* to his brother. *Educ*: Fettes College, Edinburgh; Balliol Coll., Oxford. Ent. I.C.S., 1895; served as Asst. Commsr., Junior and Senior Secy. to Financial Commr., in Punjab; Dy. Commr. of various Frontier districts, Secy. to Frontier Administration; accompanied Dane Mission to Kabul, 1904-5. *Address:* Government House, Peshawar.

GREAVES, Hon. William Ewart; Judge of Calcutta High Court, since 1914; *b.* 1869; *Educ.:* Harrow; Keble College, Oxford. Asst. Master at Evelyns, nr. Uxbridge, 1894-99; called to Bar, Lincoln's Inn, 1900. *Address:* 2, Short Street, Calcutta; 33, Marlborough Place, N. W.

GREGSON, Edward Gelson, C.I.E., Supdt. of Police, N. W. F. Prov.; *b.* 1877. *Educ.*. Portsmouth Grammar School. Asst. Blockade Officer, Waziristan, 1900; Poll. Officer, Mohmand Border, 1908; Commdt., Border Military Police, Peshwar, 1902-07; Per. Asst. to Inpsr.-Gen. of Pol., N. W. F., 1907-9; on special duty, Persian Gulf, 1909-12; Commissioner of Police, Mesopotamia. *Address:* Peshawar.

GREY, Lt.-Col. William George, I. A.; Poll. Dept., Govt. of India; Consul-Gen. for Khorassan, since 1916; *b.* Wellington, New Zealand, 1866. *Educ.:* Westward Ho, N. Devon. Joined army 1886; served Natal, Straits Settlements, and Gibraltar; transferred to I. A., 1889; transferred to Pol. Service as Vice-Consul, Bandar Abbas, 1902; served as Pol. Agent at Maskat, Oman, Arabia, 1904-8; permanently appointed to Poll. Dept., Govt. of India, 1906; Pol. Agent, Koweit, P. G., 1914-16; served in Mysore, Calcutta, and Baluchistan. *Address:* Meshed, P. G.

GROVER, Lieut.-Gen. Sir Malcolm Henry Stanley, K.C.B., K.C.I.E., C.B.; Commdg. 4th (Quetta) Division, India, since 1912; *b.* 1858. *Educ.:* Charterhouse; R. M. C.,

Sandhurst. Ent. Army, 1876; Subst. Col., 1902; Maj.-Gen., 1907; Lt.-Gen., 1912; D. A. A. G. Punjab, F. F. 1894-95; D. A. Q. M. G. Punjab Command Hdqrs., 1895-98: A. A. G. Punjab F.F., 1898-1900; A. Q. M. G. Eastern Command Hdqrs., 1902-05; commanded Cavalry Brigade, Punjab, 1906-08; served Afghan Campaign, 1879-80; Sudan, 1885,; N. W. F. I.; Waziristan. 1894-95; Tochi, 1897-98; South Africa, 1901-02, Insptr.-Gen of Cavalry in India, 1908-11; Secy. to Govt. of India, Army Dept., 1911-12. *Address:* Quetta.

GRUNING, JOHN FREDERICK, C.I.E., 1915; Commissioner of Orissa, *b.* 1 October 1870; *m.* to Mabel Lydia (Baker). Educated at Eastbourne College, and St. John's College, Camb. Member of Legislative Council, Bihar and Orissa. Publications: Gazetter of Jalpaiguri: A Pamphlet on Emigration to the Tea Gardens of Assam, Lalbagh, Cuttack, Orissa.

GUBBAY, MOSES MORDECAI SIMEON, C.I.E., I.C.S.; Controller of Currency. *b.* Shanghai, 1876. *Educ.*: Clifton; Caius College, Cambridge. Under Secy. to Govt. of India, Commerce Dept., 1906-10; Collr. of Customs, Bombay, 1910-1915; Wheat Commissioner for India, 1915; Controller of Food Stuffs, 1918. *Address:* Simla.

GUPTA, SIR KRISHNA GOVINDA, K.C.S.I., C.S.I.; Bar.-at-Law, Middle Temple, 1873; late I.C.S.; *b.* 1851. *Educ.:* Mymensing Govt. School; Dacca Coll.; London University Coll. Joined I.C.S., 1873; passed through all grades in Bengal; Secy., Board of Rev. 1887; Commsr. of Excise, 1893; Divl. Commsr., 1901; Member to Board of Rev., 1904, being first Indian to hold that appointment; Member, Indian Excise Committee, 1905; on special duty in connection with Fisheries of Bengal, 1906; deputed to Europe and America in 1907 to carry on fishery investigation; nominated to Indian Council, 1907; being one of two Indians who were for first time raised to that position; retired from India Office on completion of term, March 1915.

GURDON, LIEUT.-COLONEL PHILIP RICHARD THORNBAGH, C.S.I., M.R.A.S., Commissioner of the Assam Valley Districts, *b.* 2 February 1863; *m.* to Ada Elizabeth McNaught. Educated at Charterhouse School, Godalming and the R. M. C., Sandhurst. In military employ from 1882 till 1886; after which served in the Assam Commission as Assistant Commissioner, Deputy Commissioner and Commissioner of a division, also as Superintendent and Honorary Director of Ethnography; Vice-President, Council of the Chief Commissioner of Assam since 1916. Publications: The Khasis, A short note on the Ahoms: has contributed articles to the Journal of the Royal Asiatic Society and to the Encyclopædia of Religious and Ethics. *Address:* Gauhati, Assam.

GWALIOR, H. H. MAHARAJAH SINDHIA OF, G.C.V.O., G.C.S.I., Hon. LL.D., Camb., D.C.L. Oxon; Hon. and Extra A.D.C. to King; Hon. Col., 1st D. & O. Lancers, 1906; Hon. Maj.-Gen.; *b.* 20 Oct. 1876; *S.* 1886; Made Hon. Col., British Army, 1898; Maj.-Genl.: went to China as Orderly Officer to General Gaselee, 1901; provided expedition with hospital ship; salute of 21 guns. Was chiefly responsible for the purchase and upkeep of the hospitalship Loyalty 1914-18. *Address:* Gwalior, C.I. Sipri, C.I.

HAFFKINE, WALDEMAR MORDECAI WOLFF, C.I.E.; Bacteriologist with Govt. of India; *b.* Odessa 15 (3) Mar. 1860. *Educ.*: Classical Coll., Berdiansk (Southern Russia), 1872-79; and Odessa University, Faculty of Science, 1879-83. Engaged research work at Zoological Museum, Odessa, 1883-88; Asst. Professor of Physiology, Geneva Medical School, Switzerland, 1888-89; Asst. to Pasteur, Paris, 1889-93; on bacteriological research duty, India, since 1893. Cameron Prize in Practical Therapeutics, University of Edinburgh, 1900; Mary Kingsley Medal, 1907; Academie des Sciences Prize, Paris, 1909. *Decorated* for research work in India. *Address:* Pasteur Institute, Paris; Govt. of India Biological Laboratory, Calcutta.

HAIG-BROWN, WILLIAM ALBAN, Banker (Partner, Messrs. King, King & Co., and King Hamilton & Co.), *b.* 31 May 1870. Educated at Winchester College Continuously from 1888 in the employ of Henry S. King & Co., London and King King & Co., Bombay, until 1911, when became a partner. *Address:* Khatao Mansions, Wellington Lines, Bombay.

HAILEY, HAMMET REGINALD CLODE, C.I.E.; Director of Land Records and Agriculture, U.P., since 1912; Member of Lieut.-Governor's Council. *Educ.*: Merchant Taylor's School; St. John's College, Oxford. Entered I.C.S., 1892; Jt. Mag., 1899; Dy. Commsr., 1905; Jt. Sec., Board of Revenue, 1906. *Address:* Oudh.

HAILEY, HON. WILLIAM MALCOLM, C.S.I., C.I.E.; I.C.S.; Chief Commsr. of Delhi, since 1912; *b.* 1872; *m.* 1896, Andreina, *d.* of Count Hannibale Balzani, Italy. *Educ.*: Merchant Taylor's School; Corpus Christi College, Oxford (Scholar). Jun. Sec., Financial Commsr., 1898; Colonisation Officer, Jhelum Canal Colony, 1902; Sec., Punjab Govt., 1907; Dy. Sec., Govt. of India, 1908; Member, Durbar Committee, 1911; Member, Imp. Leg. Council, 1912. *Address:* Delhi.

HAKSAR, LT.-COL. KAILAS NARAIN, C.I.E., Mahsir-Khao-Bahadur; Pol. Member, Gwalior Durbar, since 1912; *b.* 1878. *Educ.*: Victoria College, Gwalior, Allahabad University; Hon. Prof. of History and Philosophy, 1899-1902; Priv. Sec. to Maharaja Scindia in 1903-12; Under Sec., Pol. Dept., on dep. 1905-7; Capt. 4th Gwalior Imp. Ser. Inf., 1902; Lt.-Col., 1910; Sen. Member Board of Revenue, 1910-13. *Address:* Gwalior.

HALL, HAMMOND; *b.* 1857. *Educ.*: Bedford Grammar School; Blackheath Proprietary School; King's Coll., Lond. Studied colliery and railway engineering, 1876-82; Assist. Editor, Birmingham *Daily Times*, 1884-87; Sub-editor, *Sunday Times*, 1887-89, Chief Sub-editor of *Daily Graphic*, 1890-91; Editor,

1891-1907; Editor *Hazell's Annual*, 1900-13; on staff of *Statesman*, since 1913. *Address:* *Statesman* Office, Calcutta.

HALL, Major Ralph Ellis Carr, C.I.E., I.A.; Mily. Accts. Dept., Field Controller, Poona; *b.* 1873. Joined army, 1894; Major, 1912; served Tirah, 1897-98; European War, 1914-17. *Address:* Field Controller, Poona.

HALLIDAY, Francis Charles Tollemache, M.V.O.; Dy. Commsr. Ind. Police. *Address:* Indian Police Headquarters, Calcutta.

HAMILTON, C. J., M.A., F.S.S.; Minto Professor of Economics, Calcutta University, since 1913; Fellow of Calcutta University; *b.* 1873. *Educ.:* private tutor; King's College, London; Caius College, Cambridge; graduated first class Moral Science Tripos, 1901; Member of Mosely Educational Commission to U.S.A., 1903; Member of Inner Temple, 1903; Dunkin Lecturer at Oxford University. *Address:* The University, Calcutta.

HANKIN, Arthur Crommelin, C.S.I., C.I.E.; Inspector-General of Police and Jails, Hyderabad, since 1896; *b.* 1859; Joined C.P. Police, 1878; Dist. Supdt. of Police, 1881-1888 and 1890-91; on dep. in connection with Dacoity operation in the Bundlekhand Agency; served in operations for suppression of Thugi and Dacoity in Central India, 1894-96. Member of Indian Police Commission, 1902-3; Dy. Inspr.-Gen. of Police in C.P., 1906; retired from British service, 1914. *Address:* Hyderabad.

HANKIN, Ernest Hanbury, M.A., Sc.D.; Chemical Examiner, U. P. and C. P., since 1892; *b.* 1865. *Educ.:* Merchant Taylor's School; Univ. Coll., London; St. Bartholomew's Hospital, London; St. John's Coll., Cambridge; Koch's Laboratory, Berlin; Institute Pasteur, Paris. *Address:* Agra.

HARI KISHAN KAUL, Rai Bahadur Pandit, M.A., C.I.E.; *b.* 1869; *s.* of Raja Pandit Suraj Kaul, C.I.E. *Educ.:* Govt. Coll., Lahore. Asstt. Commsr., 1890; Jun. Secy. to Financial Commsr., 1893-97; Settlement Officer, Muzaffargarh, 1898-1903; Mainwali, 1903-8; Dy. Commsr., 1906; Dy. Commsr. and Supdt., Census Operations, Punjab, 1910-12; Dy. Commsr., Montgomery, 1913; on special duty to report on Criminal Tribes, Dec. 1913-April 1914, and since March 1916. *Address:* Abbott Road, Lahore.

HARNAM SINGH, The Hon. Raja Sir, K.C.I.E.; *b.* 15 Nov. 1851; *y. s.* of late H. H. Raja Rajgan Sir Raja Randher Singh, Bahadur of Kapurthala, G.C.S.I. *Educ.:* Kapurthala. Served as member of Hemp Drugs Commission in 1893-94; and is Hon. Life Secy. to B. I. Association of Talukdars of Oudh and Fellow of Punjab University, was member of Imp. Leg. Council and afterwards of Punjab Leg. Council, 1900-2; created Raja, 1907. *Address:* Simla or Lucknow or Jullundur City.

HARRIS, Leonard Tatham; Services lent to the War Office. *Educ.* Falmouth Grammar School; Bath College; New Collage, Oxford. Entered I.C.S., 1891; Dist. Magte. and Coll., Bangalore, 1899; Head Asst., 1902; Commissioner, Coorg, 1905-12.

HARRISON, Albert John, C.I.E., Manager, Meckla Nuddee Sawmills, Dibrugarh, Assam, since 1902; *b.* 1862; *Educ:* Rugby; Harrow. Joined Jokai Tea Co. as Engineer, 1890; managed Tippuk Tea Garden, 1895-1902. *Address:* Dibrugarh, Assam.

HART, George Sankey, C.I.E.; Inspr.-Gen of Forests to Govt. of India, since 1913; *b.* 1866. *Educ.:* St. Paul's School; Wren and Gurney; R.I.E. College, Cooper's Hill, Asst. and Dy. Conservator of Forests, Punjab, 1887-1906; Conservator of Forests, C. P., 1906-08; Bengal, 1908-10; Chief Conservator of Forests, C. P., 1910-13. *Address:* Simla.

HARTLEY, Lewis Wynne, J.P., C.I.E. (1918); Collector of Income Tax, Bombay, *b.* 1867, *m.* to Annie, *d.* of William Rowlands, Rofft, Bangor, Wales. Educated at private school. Assistant to Messrs. Gaddum Bytell & Co., Cotton Merchants, Bombay, 1889-1900; appointed Presidency Inspector of Factories, Bombay Presidency, Sind and Central Provinces, 1901; Collector of Income-Tax for the City and Island of Bombay, 1906. *Address:* Bombay Club, Bombay.

HARTNOLL, Sir Henry Sulivan, Kt.; Chief Judge, Court of Lower Burma, since 1906; Barrister, 1898. *Educ.:* Exeter Grammar School: Trinity College, Oxford. Entered I.C.S., 1881; served in Burma as Assist. Commissioner; Dy. Commissioner, 1890; Commissioner, 1902. *Address:* Chief Court, Rangoon.

HATWA, Maharaja Bahadur Guru Maha-dev Asram Prasad Sahi of; *b.* 19 July 1893; *S.* Oct. 1896 to the *Gadi* after death of father Maharaja Bahadur Sir Kishen Pratap Sahi, K.C.I.E., of Hatwa. *Address:* Hathuwa P. O., District Saran, Behar and Orissa.

HAY, Major Westwood Norman, C.I.E.; I. A.; Commandant Zhob Militia, Baulchistan; *b.* 1871. Entered R. A., 1891; Major, 1909; D.A.A.G. India, 1909-11; served China, 1900. *Address:* Headquarters, Zhob Militia, Baluchistan.

HAY, Sir Lewis John Erroll; 9th Bt. of Park, *cr.* 1663; Indigo Planter; *b.* Stirling, N.B., 17 Nov. 1866; *s. s.* of 8th Bt. and *d.* of John Brett Johnston of Ballykilbeg, Co. Down; *S.* father 1889; *Address:* Dooriah Motipur, Behar.

HAY, Alfred, D. Sc.; Professor of Electrical Technology, Indian Institute of Science, Bangalore; *b.* Russian Poland, 1886; *Educ.:* School education received at one of Warsaw "Gymnasia." University of Edinburgh, B. Sc., 1891; studied electrotechnology in London under the late Prof. Ayrton at Central Technical College; Demonstrator in Electrical Engineering at Univ. Coll., Nottingham, 1892; Lecturer on Electro-Technics at Univ. Coll., Liverpool, 1896-1901; graduated D. Sc., 1901; Professor of Electro-Technology, Cooper's Hill, 1901-04; Head of Physics and Elec. Eng. Dept., Hackney Technical Institute, London, 1904-08. *Address:* Indian Institute of Science, Bangalore.

HAYDEN, Henry Hubert, C.I.E.; B.A., B.A.I., F.G.S., F.R.S., Hon. D. Sc., Calcutta; Director, Geological Survey of India; *b.*

1869. *Educ.:* Hilton College, Natal; Trinity College, Dublin. Joined Geological Survey of India. 1895; attached to Tirah Exp. Force, 1897-98; Tibet Frontier Commission, 1903-04; services lent to Amir of Afghanistan, 1907-08. *Address:* Geological Survey of India, Calcutta.

HAYWARD, Mr. Justice Maurice Henry Weston, I.C.S., LL.B. (Cantab.), Bar.-at-Law, Judge, High Court, Bombay, *b.* 2 June 1868; *s.* of the late R. B. Hayward, Esq., F.R.S., of the Park, Harrow, *m.* to Alice Christine, *d.* of the late Judge Barber, Q.C., of Ashover, Derbyshire. Educated at Harrow School and St. John's College, Cambridge. Assistant Collector Bombay, 1889; Under-Secretary to Bombay Government 1895; Judicial Assistant, Kathiawar, 1897; District Judge, Karachi, 1899; Legal Remembrancer and Secretary to Government 1905; Additional Judicial Commissioner, Sind, 1907; Acting Judicial Commissioner, Sind. 1909, 1913 and 1916; Ag. Judge High Court, Bombay, 1911, 1914 and 1915; Judge High Court, Bombay, 1918. *Address:* Yacht Club or High Court, Bombay.

HEATON, Hon. Sir Joseph John, Kt.; Judge, High Court, Bombay, since 1906; *b.* April 1860; *Educ.:* Bradford Grammar School; King's Coll., Cambridge. Entered I.C.S., 1881; Priv. Secy., Govr. of Bombay, 1895-8; Judge and Sessions Judge, 1898; Addtl. Judicial Commissioner, Sind, 1906; Judicial Commissioner, 1907. *Address:* Malabar Hill, Bombay.

HENDERSON, Robert Herriot, C.I.E.; Supdt. of Tarrapur Company's Tea Garden, Cachar, Assam; Chairman, Ind. Tea Assoc., Cachar and Sylhet. Represented tea-planting community on Imp. Leg. Council, 1901-2, when legislation regulating supply of indentured coolie labour was under consideration. *Address:* Cachar, Assam.

HENRY, William Daniel, C.I.E.; Manager, Alliance Bank of Simla, Ltd., Simla, and Colonel Commanding Simla Rifles, I.D.F., V.D.; A.D.C.; *b.* 1855. *Educ.:* Dr. J. Yeats' School, Peckham. *Address:* Kelvin Grove, Simla.

HERTZ, Henry Felix, C.I.E., F.R.G.S.; Barrister; In charge of Civil Police, Burma. *b.* 1863; *g. s.* of Bishop Hertz, of Ribe, Denmark, *Educ.:* St. Xaviers' College, Calcutta. Took active part in operations round Mandalay, 1886-87, and in Shan States, 1887-90; in operations 1890-1900, in Kachin Hill and Chinese-Frontier, *Address:* Bassein, Burma.

HERTZ, William Axel, C.S.I., J.P., F.R.G.S.; Burma Commission, Dy. Commsr., Fort Hertz, Burma, *b.* Moulmein, 1 Oct. 1859; *g. s.* of Bishop Hertz of Ribe, Denmark. *Educ.:* St. Xavier's College, Calcutta. Joined Burma Provl. C. S., 1886; served as Pol. Officer, Burma War, 1886-89; against dacoits 1889-90; promoted to Burma Commission Settlement Officer, Magwe, 1900-3; in charge of Hpimaw Expedition, 1910-11 (thanked by Government of India). *Address:* Putao Hkamti Long, Burma.

HICKLEY, Victor North, C.I.E., V.D.; Lieut.-Col., Behar Light Horse; A. D. C. to Lt. Govr, Behar and Orissa; indigo planter in Behar. *Educ.:* Eton; Exeter College, Oxford. *Address:* Mozufferpore.

HIGHET, Sir Robert Swan, Kt., M.I.C.E.; Agent, E. I. Ry., since 1912; *b.* 1859; *m.* 1886, Violet Gibson, *d.* of late Charles Forgan, Towerhill, Ayrshire. *Educ.:* Ayr Academy. Pupil and Assistant to John Strain, Civil Engineer and Vice-President, I.C.E.; joined E. I. Ry., 1883; Ch. Engr., 1903. *Address:* E. I. Ry. House, Calcutta.

HIGNELL, Sidney Robert, C.I.E.; I.C.S.; Offg. Sec. to Govt. of India, Home Dept., since 1918. *Educ.:* Malvern; Exeter College, Oxford. Entered I.C.S., 1896; Magte. and Coll., 1912. *Address:* Home Dept., Govt. of India, Delhi.

HILL, Sir Claude Hamilton Archer, K.C.S.I., C.S.I., C.I.E.; Ordinary Member, Council of Govr. Gen. of India, since 1915; *b.* 21 Sep. 1866; *m.* 1892, Frances May, *d.* of Sir Raymond West. *Educ.:* St. Mark's School Windsor; Emmanuel Coll., Cambridge. Joined I.C.S., 1887; Under Secy. to Bombay Govt., 1892; Under Secy. to Govt. of India in Home Dept., 1895-97; First Asst. Resident at Hyderabad, 1897-99; Priv. Secy. to H. E. Lord Northcote Govt. of Bombay, 1899-1903; Dy. Secv. to Govt. of India, Foreign Dept., 1903-1904; Political Sec. to Govt. of Bombay, 1904-6; Resident, Mewar, 1906-8; Agent to Gov. in Kathiawar, 1908-12; Ord. Member, Executive Council, Bombay, 1911-15. *Address;* Peterhof, Simla.

HILL, Montague, C.I.E.; Chief Conservator, C. P., since 1913. Joined I. F. D., 1887; Conservator, Burma, 1906; Offg. Insp. Gen. of Fores s, India, 1914, *Address;* Pachmarhi, C.P.

HOGG, Malcolm Nicholson, B.A. (Oxford), 1904. Manager, Forbes, Forbes Campbell & Co., Ld., Bombay, *b.* 17 January 1883; *m.* Lorna, younger *d.* of Sir Frank Beaman. Educated at Eton and Balliol College, Oxford. Joined London Office of Forbes, Forbes Campbell & Co., Ltd., in September 1904; came to Bombay, February 1905; succeeded to managership, Bombay branch, 1912; Deputy Chairman, Bombay Chamber of Commerce, and Member. Legislative Council of the Governor of Bombay, 1915-16 and 1916-17; Chairman, Bombay Chamber and Member, Legislative Council of Viceroy, 1917-18 and 1918-19 Director, Bank of Bombay (President, 1918); Member of Board of Trustees of Port of Bombay, etc.. Member of Franchise Committee under Montagu-Chelmsford Scheme, 1918. *Address:* Forbes Building, Home Street, Bombay.

HOJEL, Lt.-Col. James Graham, C.I.E., M. B., B.Ch.; I.M.S.; *Educ.:* Trinity College, Dublin. *Address:* O. C., Lady Hardinge War Hospital, Bombay.

HOLLAND, Robert Erskine, C.I.E., I.C.S.; Political Department, Government of India; *b.* 1873; *s.* of Sir Thomas Holland, K.C. *Educ.:* Winchester; Oriel Coll., Oxford. Entered I.C.S.; 1895; Secretary, Board of

Revenue, Madras, 1903; served Foreign Department of Govt. of India, 1904-08; Political Agent and Consul at Muscat, 1908-10; Political Agent, Eastern States, Rajputana, 1911-13; Depy. Secy., Govt. of India, 1914; On political duty with Mesopotamia Field Force, 1915 and 1917. *Address:* c-o Grindlay & Co., Bombay.

HOLLAND, SIR THOMAS HENRY, K.C.I.E. Hon. D.Sc. Calcutta and Melbourne; F.R.S.; F.G.S.; President, Institution Mining Engineers; President, Indian Industrial Commission, 1916; President, Board of Munitions, India, 1917; Actg. Secy., Commerce and Industry Dept., Government of India, 1919; Member of Council Institution Mining and Metallurgy; Vice-President, Institution of Petroleum Technologists; Professor of Geology and Mineralogy, Manchester University, since 1909; *b.* 22 Nov. 1868; *m.* Frances Maud, *d.* of late Chas. Chapman, Dy. Commsr. in Oudh, National Scholar, 1885; Murchison Medallist and Prizeman, 1887; Assoc. Roy. Coll. Sci. 1888; Berkeley Fellow of Owens Coll. 1889; joined Indian service, 1890; Dy. Supdt., Geological Survey, 1894; President, Asiatic Society of Bengal, 1909; President, Mining and Geological Institute of India, 1906-1907; Director of Geological Survey, India, 1903-1909; Chairman of Trustees, Indian Museum, 1905-9; President, Burma Oil Reserves Committee, 1908; Fellow and Reader of Calcutta University; Dean of Faculty of Science, 1909; President of Board of Studies in Geology and Mineralogy, 1905-09; President of Manch. Geol. and Min. Socy., 1912-14; President, Indian Mining and Geological Club, and of Royal College of Science Old Students' Association, 1910; Member of Royal Commission on Oil Fuel and Engines, 1911-13; Major and Commandant, Manchester University Officers' Training Corps; Member of Advisory Committee, Imperial Institute; Bigsby Medallist, Geological Society of London, 1913; President, Geological Section, British Association, 1914; Hon. Member. Royal Cornwall Polytechnic Society, and of Mining and Geological Institute of India, *Publications:* numerous memoirs on Petrology, Geology, and Anthropology. *Address:* Simla.

HOLLOWAY, BRIG.-GEN. BENJAMIN, C.I.E.; Indian Army; *b.* 1861; Entered Indian Army, 1883; Col., 1912; D.A.Q.M.G., India, 1900; Asst. Sec., Military Dept., Govt. of India, 1901-06; Commandant, 29th Lancers, 1909; Dy. Sec., Army Dept., Govt. of India, 1912; Secretary, 1914; G.O.C., Southern Brigade, 1916; served Burma, 1885-86; *Address*: Wellington, Nilgiris.

HOLME, ALAN THOMAS, I.C.S.; Resident in Mewar, Rajputana; *b.* 1872. *Educ.:* International School, Naples; Bedford Grammar School; Clifton College; Trinity College, Cambridge. Served in U. P. as Magistrate, Settlement Officer, and acting Private Sec. to the Lt.-Gov. and in Rajputana as Settlement Officer, Political Agent of Southern States, and Resident at Udaipur (Mewar), and Commissioner at Ajmer-Merwara. *Address:* Udaipur, Rajputana.

HOOPER, REV. WILLIAM, D.D.; Missionary C.M.S.; Translator, Mussoorie, since 1892; *b.* 1837. *Educ.:* Cheltenham Preparatory School; Bath Grammar School; Wadham College, Oxford; Hebrew Exhibition; Sanskrit Scholarship; 1st class in Lit. Hum.; B.A., 1859; M.A., 1861. Went to India, C.M.S., 1861; Canon of Lucknow, 1906; Vicar of Mount Albert, New Zealand, 1889-90, *Address:* Mussoorie, India.

HOWARD, ALBERT, C.I.E., M.A., A.R.C.S. F.L.S.; Imperial Economic Botanist to Govt. of India, since 1905; *b.* 1873; *Educ.:* Royal College of Science, London; St. John's College, Cambridge. First Class Hons. Nat. Science Tripos, 1898; B.A., 1899; M.A., 1902; Mycologist and Agricultural Lecturer, Impl. Dept. of Agriculture for West Indies, 1899-1902; Botanist to South-Eastern Agricultural College, Wye, 1903-1905. Numerous papers on botanical and agricultura subjects. *Address:* Pusa, Bihar.

HOWARD, HENRY FRASER, C.I.E.; Sec., Govt. of India, Fin. Dept. since 1917; *b.* 1874. *Educ.:* Aldenham School; Trinity Hall, Cambridge. Classical Tripos, 1895, Class 1, Division 1; I.C.S., 1896; Supdt., Revision of Impl. Gazatteer for Bengal, 1904; Und.-Secy. to Govt. of India, Fin. Dept. 1905; Collector of Customs, Calcutta, 1909-13; Controller of Currency, India, 1914-16; Officiating Sec. to Govt. of India, Commerce and Industry Dept. 1916. *Address:* Delhi and Simla.

HOWELLS GEORGE, B.A. (Lond.); M.A. (Camb.); B. Litt. (Oxon); B.D. (St. Andrews); Ph.D. (Tubingen); Principal of Serampore College, Bengal, since 1906; *b.* May 1871. *Educ.:* Gelligaer Grammar School; Regent's Park and University Colleges, London; Mansfield and Jesus Colleges, Oxford; Christ's College, Cambridge: Univ. of Tubingen. Appointed by Baptist Missionary Society for Educational work in India, 1895; located at Cuttack, Orissa, engaged in High School and theological teaching, and general literary and Biblical translation work, 1895-1904; originated movement for reorganisation of Serampore College. Angus Lecturer, 1909; and Fellow of University of Calcutta, 1913. *Address:* Serampore College, Serampore, Bengal.

HUDDLESTON, CAPTAIN ERNEST WHITESIDE, C.I.E.; J.P.; R. Ind. Mar; Sen. Mar. Transport Officer, Bombay, since 1914; *b.* Aug 1874; *Educ.:* Bedford School. Entered R. I. M. 1895; served Egyptian Camp, 1895-96; wrecked in Warren Hastings' troopship off Reunion, 1897; received Roy. Humane Society's silver medal, and Lloyd's silver medal for saving life on this occasion; Lieut. 1900; served China Expedition (Boxer Rising), 1901-02, as Assist. Mar. Transport Officer; Mar. Transport Officer, Somaliland Expedition, and was in charge of landing operations in Obbiat, 1902-4; Staff Officer, Bombay Dockyard, 1911; Commander 1913, Captain, 1917. *Address:* R. I. M. Dockyard, Bombay.

HUNTER, MATTHEW, C.I.E.; Principal, Rangoon College, since 1911. *Educ:* Giggleswick School; Queen's College, Oxford; Strassburg and Heidelberg Universities; Honours,

Final School of Natural Science, Oxford; Burdett-Courts University Scholarship in Geology; M.A., 1890. Lecturer in Chemistry and Physics, Rangoon College, 1890-1909; Chemical Examiner to Govt. of Burma, 1890-1905; Acting Principal, Rangoon College, 1905 and 1909-11. *Address:* Rangoon College, Rangoon.

HUSSAIN, Moulvi Ahmed, C.S.I., Nawab Ameen Jung Bahadur; Assistant Minister to H. H. Nizam; since 1914, and Ch. Sec. to Nizam's Govt., since 1896. *Educ.:* Christian College, Presidency College, Madras Univ. M.A., 1890; Dy. Coll. and Mag. Madras Presidency, 1890-92; Assit. Priv. Sec. to H. H. Nizam, 1893; F.S.A., 1912; F.R.A.S., 1914.

HYDERABAD, His Exalted Highness Asaf Jah Muzaffar-ul-Mamalik Nizam-ul-Mulk Nizam-ud-Daula Nawab Mir (Sir Osman Ali Khan Bahadur Fateh Jang) of, G. C. S. I., (1911), son of the late Lieut.-Genl. Mir Sir Mahboob Ali Khan Bahadur, G. C. B.; G. C. S. I., Nizam of Hyderabad; *b.* 1886; *ed.* privately; Hon. Col. in the Army, and of 20th Deccan Horse. *Address:* Hyderabad, Deccan.

IBRAHIM, Sir Fazulbhoy Currimbhoy, Kt., Millowner and Merchant, Bombay; Additional Member, Governor-General's Council. *Address:* 13 Esplanade Road and Fazul Manzil, Pedder Road, Bombay.

IDAR, Maharaja of, since July 1911, Maharaja Dhiraj Maharaji Shri Dolat Singhji; *m.* Maharaniji Shri Poonglianji. *Heir:* *s.* Maharaja Kumar Himmatsinghji. *Address:* Himmatnagar (Mahikantha Agency).

IFTIKHAR-UD-DIN, C.I.E., Fakir Sayad; Settlement Collector, Punjab, since 1910; joined service, 1886; Revenue Member of Council of Tonk State, 1906; Special duty with Amir of Afghanistan, 1906; British Agent at Cabul, 1907. *Address:* Lahore.

IMPEY, Lt.-Col. Lawrence, C.S.I., C.I.E.; Resident at Baroda; *b.* 1862. *Educ.:* Marlborough; Sandhurst. Indian Army, 1885; employed under Govt. of India in the Pol. Dept. 1887; has held appointments of Pol. Agent in Alwar, Bhopal, Eastern States Rajputana, Bundelkhand, etc. *Address:* Baroda.

INDORE, Maharaja of, H. H. Maharajah-Dhirdaja Tukoji Rao Holkar. Bahadur; *b.* 1891. *Educ.:* Mayo Chiefs Coll., Ajmere; Imp. Cadet Corps. *Address:* Indore.

IRWIN, Henry, C.I.E., M.I.C.E.; *b.* 1841; joined P. W. Dept. 1868; Consulting Architect to Govt. 1889; retired, 1896. *Address:* Adyar House, Adyar.

ISRAR, Hasan Khan, Khan Bahadur, C.I.E.; Jud. Minister, Bhopal; *b.* Shahjahanpur. *Educ.:* Shahjahanpur. Bareilly. *Address:* Judicial Minister, Bhopal.

IZZAT NISHAN, Khuda Bakhash Khan Tiwana; Nawab, Malik; Dist. Judge, Dera Ghazi Khan; *b.* 1866. *Educ.:* Govern. High School, Shahpore; private training through Col. Corbyn, Deputy-Commissioner. Appointed an Hon. Magistrate, 1881; Extra Asst. Commsr., 1894; British Agent in Cabul, 1903-06. *Address:* Khawajabad, district Shahpore, Punjab.

JACKSON, John Ernest, A.C.A., C.I.E.; Chief Auditor, B. B. & C. I. Railway, Bombay. *b.* 26 November 1876; *Educ.:* Marlborough College. *Address:* Malabar Hill, Bombay.

JACOB, Arthur Leslie, C.I.E.; Major I. A. Pol. Ag.. Zhob, since 1912; in military employment, 1891-98; Pol. Asst.. Zhob, 1898 Asst. to Gov.-General's Agents, Baluchistan 1901; Pol. Ag., Baluchistan, 1909. *Address* Zhob, Baluchistan.

JAIPUR, Maharaja of, Maj.-Gen. H. H Saramad-i-Rajhai-Hindustan Raj Rajendra Shree Maharajadhiraj, Sir Sawa Madho Singh Bahadur, K.G.C.S.I., G.C.I.E. G.C.V.O. Donat of the Order of the Hospital of St. John of Jerusalem, LL.D. Edin Hon. Major-General; Hon. Col. of 13th Rajputs (Shekhawat) Regiment; Member of First Class of Order of Crown of Prussia 1910; *b.* 1861; *s.* 1880. *Address:* Jaipur

JAMES, Lt.-Col. Charles Henry, C.I.E I.M.S.; Civil Surgeon, Delhi: *b.* 1863. *Educ.* Cranleigh; St. Thomas' Hospital, London M.R.C.S. and L.R.C.P.; Asst. House Surgeon House Surgeon and Resident Accoucheur, St Thomas' Hospital, 1888-89; House Physician Gen. Lying-in Hospital, 1889-90; entered I. M. S., 1891; Dy. Sanitary Commsr., Punjab 1894-1900; Medical Adviser, Patiala State 1903-12; F.R.C.S., England, 1908; Major 1903; Lieut.-Colonel, 1911; Civil Surgeon Simla, 1912-16. *Publications:* Manual for Vaccinators in the Punjab, 1895; Report on Plague in Bombay, 1897; Report of Outbreak of Plague in Punjab, 1897; articles on Medical and Surgical subjects in medical journals. *Address:* Delhi.

JAMIAT RAI, Diwan, Rai Bahadur, C.I.E. *b.* 1861. *Educ.:* Bhown, Kohat and Gujrat Ent. Govt. service, 1880; served in Political Office with Kuram F. F. 1880; accompanied Afghan Boundary Commission, 1885-86 special duty, boundary settlement of Laghai Barkhan, 1897; Asst. to the Supdt. of Gazetteers of Baluchistan, 1902-07; service acknowledged by Govt. of India; Asst. to Supdt. of Census Operations, Baluchistan 1910-11; Ex. Asst. Commsr. 1902; Settlement Officer, Baluchistan, 1912. *Address* Quetta.

JANJIRA, H. H. Nawab Sir Sidi Ahmad Khan Sidi Ibrahim Khan, G.C.I.E.; *b* 1862; *s.* 1879; descendant of Sarul Khan family. *Heir:* *s.* Sidi Mahamad Khan, *b.* Mar. 1914. *Address:* Janjira, Kolaba.

JAORA STATE, Major H. H. Fakhar-ud Daula Nawab Muhammed Iftakar Ali Khan Bahadur Saulat, K.C.I.E. *b.* 1884 H. H. served in European War. *Address* Jaora State, Central India.

JARDINE, William Ellis, C.I.E., F.R.G.S. M.R.A.S.; *b.* 1867. *Educ.:* Fettes College Edinburgh; Wren's; Trinity College, Cambridge. Ent. I.C.S. 1886; joined Pol. Dept of Govt. of India, 1893; became 2nd Asst

Resident, Hyderabad, 1st. Asst., Ag. to Govr.-Gen. in Cent. Ind. and 1st Asst. Resident, Hyderabad: Pol. Ag., Bundelkhand, 1904-09; Malwa, 1910-11; Resident, Gwalior, 1912-13; Baroda, 1914; Gwalior, 1914-1917; Knight of Grace of Order of St. John of Jerusalem. Royal Automible; Royal and Ancient Golf, St. Andrews; Royal Yacht, Bombay.

JEHANGIR, SIR COWASJEE, 1st Baronet; nephew and adopted son of late Sir Cowasjee Jehangir Readymoney, C.S.I., *b.* 8th, June 1853; *Educ.:* Proprietary School; Elphinstone College and University of Bombay; merchant, millowner and landed proprietor; Delegate of the Parsee Matrimonial Court; has assumed the name of Cowasjee Jehangir; Kt. 1895; *m.* 1876, Dhunbai, *d.* of the late Ardeshir Hormusjee Wadia, and has issue. *Address:* Readmoney House, Malabar Hill, Bombay.

JEHANGIR, COWASJI (Junior), M.A. (Cambridge), O.B.E. (1918). Partner in the firm of Cowasji Jehangir & Co., *b.* February 1879; *m.* to Hirabai, *d.* of H. A. Hormasji of Lowjee Castle. Educated at St. Xavier's College, Bombay, and St. John's College, Cambridge. Member of the Bombay Corporation since 1894; Chairman of its Standing Committee 1914-1915; Member of the Bombay Improvement Trust. *Address:* Nepean Sea Road, Malabar Hill, Bombay.

JEJEEBHOY, SIR JAMSETJEE, 5th Baronet; *b.* 6th, March 1878; *s.* father Sir Jamsetjee, 1908, and assumed the name of Jamsetjee Jejeebhoy in lieu of Rustomjee; Head of the Zoroastrian Community in Bombay; Pres. of the Sir Jamsetjee Charity Funds, M.L.C., Bombay, and Member of Municipal Corporation *m.* 1906, Serenebai Jalbhoy Ardesar Sett. *Address:* Mazagon Castle, Bombay.

JENNINGS, COL. HERBERT ALEXANDER KAYE, C.I.E.; R.A.; Director of Ordnance Stores in India; *b.* 1862; *s.* of Maj.-Gen. C. J. Jennings; *Educ.:* Wellington College. Entered R. A. 1882; Lt.-Col. 1910; Col. 1914. *Address:* Simla.

JESSE, WILLIAM, M.A.; Principal, Meerut Coll., since 1903; *b.* 7 Sep. 1870. *Educ.:* Hereford Cath. Sch.; Selwyn Coll., Cambridge. Asst. Master, Bedford Mod. Sch., 1891-94; La Martiniere Coll., Lucknow, 1894-1903; Fellow and Syndic. Allahabad Univ.; Fellow Zoological Soc. and Mem., Brit. Ornithological Union. *Publications:* Various pamphlets and papers on Indian ornithology and on Indian education. *Address:* The College, Meerut.

JEVONS, HERBERT STANLEY, M.A., B.Sc. (Lond.), F.G.S., F.S.S.; Univ. Prof. of Economics in Univ. of Allahabad since 1914, editor of Indian Journal of Economics; *b.* 8 Oct. 1875. *Educ.:* Giggleswick Gram. Sch. Univ. Coll, London; Trin. Coll., Cambridge; Geol. Inst., Heidelberg Univ. Demonstrator in Itrology, Cambridge, 1900-01; Lecturer in Mineralogy and Geology, and Asst. to Prof. T. W. Edgeworth David, F.R.S., in University of Sydney, N.S.W., 1902-04; Lectr. and later Fulton Prof. of Econ. and Pol. Science in Univ. Coll. of S. Wales and Monmouthshire, Cardiff, 1905-11; engaged on researches in economics of Indian coal trade, irrigation, and other industries, 1915-16. *Publications:* Numerous papers and articles on Petrology, Mineralogy, Economics, Politics Housing Reform, etc. *Address:* The University, Allahabad; Rhubina Garden Village, Cardiff.

JEYPORE, MAHARAJA SRI SIR VIKRAMA DEO OF, K.C.I.E.; *b.* 6 Dec. 1874; *o. s.* of late Maharajah Sri Sri Sri Ramachendra Deo and Maharani Sri Sri Sri Lakshmi Pattamaha Devi; *m.* 1893, Lady Maharani Sri Sita Patta Maha Devi, *d.* of late Rajah Sri Dharmajit Sing Deo Bahadur, Feudatory Chief, Udaipur. C. P.; one *s.* one *d.* *Educ.:* privately. *Address:* Fort, Jeypore, Vizagapatam District, Madras.

JHALAWAR, H. H. MAHARAJ RANA SIR BHAWANI SINGH BAHADUR OF; K.C.S.I.; *b.* 1874; *s.* 1899. *Educ.:* Mayo Coll., Ajmere. *Address:* Jhalrapatan, Rajputana.

JIND, H. H. FARZAND-I-DILBAND RASIKH-UL-ITIKAD DAULAT-I-INGLISHIA, RAJA-I-RAJGAN MAHARAJA SIR RANBIR SINGH BAHADUR; received hereditary title of Maharaja, 1911; G.C.I.E., K.C.S.I.; *b.* 1879; *s.* 1887. *Address:* Sangrur, Jind State, Punjab.

JODHPUR, REGENT OF, LIEUT.-GENL. SIR PERTAB SINGHJI, G.C.V.O., G.C.S.I., K.B.C., LL.D., Hon. A.D.C. to H.M. the King-Emperor; *b.* 1845; *m.* Maharani Bhatianiji (*d.* 1907); Hon. Commandant of Imperial Cadet Corps; received administrative training under H. H. Maharaja Ram Singh of Jaipur; was invited to Jodhpur by his elder brother Maharaja Sir Jaswantsingh and placed at head of Jodhpur administration; he was one of Kabul Mission of 1878, an extra A.D.C., to General Ellis in the Muhmand Expedition in 1897, and to General Sir William Lockhart in Tirah Campaign in 1898 (wounded, and despatches); in 1900 he went with British Force to China in command of Jodhpur Imperial Service Troops and saw active service: was made Ruling Chief of Idar State in Guzerat in 1902, which he abdicated in favour of his son; made Lt.-Col. and subsequently Major-General in British Army: European War, 1914-15 (despatches). On death of Maharaja Sri Sumer Singhji of Jodhpur again appointed Regent. *Address:* Jodhpur, Rajputana.

JOGLEKAR, RAO BAHADUR RAMCHANDRA-NARAYAN, I.S.O.; B.A.; Coll. Baroda State, since 1917; Depy. Coll. 1st Gr. and Native Asst. to Commsr., C.D. 1901-16; some time Cerv. Adv. to Chief of Ichalkaranji; *b.* Satara 8th Dec. 1858; *Educ.:* Deccan Coll., Poona. Held non-gazetted appointments in Nasik, Satara, Ahmednagar, Poona and Sholapur Dists. 1883-1899; Depy. Coll. 1899. *Address:* 174 Kala Haud, Shukrawar Peth, Poona City.

JOHNSTON, FREDERICK WILLIAM, C.S.I., C.I.E.; I.C.S.; in Pol. Dept. of Govt of India; Depy. Sec. to Govt. of India, Fin. Dept.; *b.* 2nd Nov. 1872; *Educ.:* Kelvinside Acad.

Glasgow; Trinity Hall, Cambridge (B. A. 1894). Asst. Commsr. 1896; went to N. W. Fron. 1899; and was employed there till end of 1911 in capacities (amongst others) of Pol. Agent, Wana and of Kurram, and as Sec. to Chief Commsr. accompanied Mahsud Exp. of 1902-03 as Pol. Off. *Address:* Simla.

JOSHI, REV. CANON, D. L., Canon of St. Thomas' Cathedral, Bombay; Hon. Chap. to Bishop of Bombay; Marathi Priest-in-charge, Emmanuel Church, Bombay; *b.* 8 May 1864; *Educ.*: Robert Money Sch., Bombay; Coll. of Science, Poona; Div. School, Poona. Left Civil Engineering for Theology, 1882; after being schoolmaster, ordained, 1893; for sixteen years in charge of the C.M.S. Marathi Church in Bombay. *Address:* Molesworth, Girgaum, Bombay.

JUGMOHANDAS VARJIVANDAS, SIR, KT., J.P.; Merchant and Landlord; *b.* 1869; *Educ.*: Fort High Sch., Bombay. Mem., Bombay Corpn., 1900-06; trustee of several charitable institutions. *Address:* Bombay.

KAJIJI, MR. JUSTICE ABDEALI MAHOMEDALI, B.A., LL.B. (Cantab.), Bar-at-Law; Prothonotary, High Court, Bombay; *b.* 12 Feb. 1871. *Educ.*: St. Mary's Institution, Byculla; St. Xavier's Coll., Bombay; Downing Coll., Cambridge, and Lincoln's Inn. Ord. Fellow, Syndic and Dean in Law of Bombay Univ. *Address:* Dilkhoosh, Grant Road, Bombay.

KANDATHIL, RIGHT REV. DR. AUGUSTINE; Titular Bishop of Arad, and Coadjutor. with right of succession to Vicar-Apostolic of Ernakulam, since 1911; *b.* Champ, Vaikam, Travancore, 10 Sep. 1874. *Educ.*: Papal Seminary, Kandy, Ceylon. Priest, 1901; Parish Priest for some time; Rector of Prep. Sem. Ernakulam, and Sec. to Vicar Apostolic of Ernakulam to end of 1911. *Address:* Ernakulam, Malabar.

KANIKA, THE RAJA OF, HON. RAJA RAJENDRA NARAYAN BHANJA DEO OF KANIKA; Mem., Imp. Leg. Council of India, since 1916; *b.* 24 March 1881. *Educ.*: Ravenshaw Coll. Sch.; Coll., Cuttack. Received management of Killah Kanika from Court of Wards, 1902; Mem. of the Bengal Leg. Council, 1909-12; Mem. of Bihar and Orissa Leg. Council, 1912-16; Pres. Orissa Land-holders' Assn.; Vice-Pres., Bengal Land-holders' Association; Mem. of Bengal Fishery Board; Vice-Pres., Bihar Landholders' Association; Mem., Roy Asiatic Soc., etc. *Address:* Cuttack, Orissa.

KANTARAJ URS, SIRDAR M., C.S.I.; Mem. of Exec. Council, Mysore, since 1913, and First Mem., since 1916; *b.* 20th Sep. 1870. *Educ.*: Maharaja's Coll. Mysore; The Christian Coll., Madras; Asst. Commsr., 1894; Asst. Priv. Sec. to H. H. Maharani Regent, 1895-99, Special Asst. Commsr., Bangalore, 1899. Depy. Commsr., Mysore Dist., also Pres., Mysore City Mun. Council, 1902; Chairman, Mysore City Imp. Trust Board, 1908; Exec. Commsr. in Mysore, 1912, Chairman, Industries and Commerce Committee, 1912-16; Mem. of Exec. Council, Mysore, 1913; created Raja Seva Dhurina (Gandabherunda Order). Oct. 1916. *Address:* Beaulieu, Avenue Road, Bangalore.

KAPURTHALA, H. H. JAGATJIT SINGH BAHADUR, MAHARAJA RAJA-I-RAJGAN OF, G.C.S.I., K.C.S.I.; *b.* Sept. 1872; *s.* father, 1877. *Address:* Kapurthala, Punjab.

KARAULI, H. H. MAHARAJA DHIRAJ SIR BHANWAR PAL, DEO BAHADUR, YADUKUR CHANDRA BHAL, G.C.I.E., K.C.I.E, *b.* 24 July 1864. *Educ.*: Mayo Col., Ajmere. *s.* 1886. *Address:* Karauli, Rajputana.

KARKARIA, R. P., *b.* Bombay, 16 May 1869, *Educ.*: St. Xavier's School and Col. B.A., 1888; Sen. Fellow and Prof., St. Xavier's Col., Bombay, 1891; Prin. and Prof. of Eng. Lan. and Lit., Coll. Insts., 1898, Examr. in Hist. and Phil., Bombay Univ.; F. R. Hist. S., M.R.A.S. *Publications:* discovered the Anstey M.S. of, and edited, 1892, with notes, Carlyle's hitherto Unpublished Lectures on European Literature and Culture, originally delivered in 1838; Parnell's Poems, and Golden Treasury, Book IV.; India—Forty Years of Progress and Reform, 1896, India since the Mutiny, Historical Sketch of the Parsis, Shivaji, Akbar, and other Essays; Bibliography of Bombay; European Travellers in Gujarat, translated Parsi Sacred Book, the Pahalavi Dinkard; Cicero's De Natura Deorum and a Teleological Treatise of the Avesta; Zoroaster and Comte—some Zoroastrian traits in Positivism, etc. *Address:* Gowalia Tank Road, Bombay.

KAYE, LT.-COL. CECIL, C.S.I., C.I.E., I. A., Chief Postal Censor, *b.* 27 May 1868; *Educ.*: Winchester. Joined 2nd Bn. Derbyshire Regt. 1889; transferred to I. A. 1892; served N. W. F. of India, 1897-98; Gen. Staff Offi. at I. A. H.-quarters, Simla, 1908. *Address:* Simla.

KEATINGE, GERALD FRANCIS, C.I.E., Dir. of Agriculture, Bombay Pres. *b.* March 1872. *Educ.*: Sherborne Sch. Balliol Coll., Oxford. Ent. I. C. S., 1894; Dir. of Agriculture, 1907; Mem. of Leg. Coun., Bombay, 1916. *Address:* Poona.

KEELING, HUGH TROWBRIDGE, C.S.I., A.M.I.C.E., Ch. Eng. and Sec. to Ch. Commsr., Delhi, since 1912; Mem. of Delhi Imp. Commn., 1913. *Educ.*: R.I.E., Coll. Asst. Eng., Madras P. W. D., 1887; Exec. Eng., 1898. *Address:* P. W. D., Delhi.

KEEN, MAJ. WILLIAM JOHN, C.I.E., Pol. Dept. Govt. of India. *Educ.*: Haileybury Coll; R.M.C., Sandhurst. Gaz. to R. Welsh Fus., 1892; Trans. to I. A. 37th Dogras, 1894; served Chitral Re. Exp., 1895; Joined Punjab Commn. 1898; Pol. Dept., Govt. of India, 1901; serving in N. W. Fron. Prov.; served Kabul Khel Exp., 1902; Mohmand Exp., 1908. *Address:* Pol. Agent, Dir swat and Chitral, Malakand, N.W.F.P.

KEITH, WILLIAM JOHN, C.I.E., M.A.; Rev. Sec., Burma, since 1912; Mem. of Coun. of Lt.-Gov.; *b.* 1873; *Educ.*: Edinburgh H. Sch. and Univ.; Christ Church, Oxford. Ent. I.C.S., 1895; (first in final Exam. 1906); Sec. to Fin. Commsr., 1899-1905; Sett. Offi., 1907-10; Sec. to Govt. of Burma, 1911-12. *Address:* Braehead, Rangoon; Canmaresk, Maymyo.

KEMP, NORMAN WRIGHT, Bar-at-Law (Inner Temple); Addl. Jud. Comsr., Sind, *b.* 29 October 1874. *Educ.:* the Collegiate, Edinburgh and Inner Temple. Chief Presidency Magistrate, Bombay, Chief Judge of Small Causes Court, Bombay; Acting Judge, High Court, Bombay. *Address:* Yacht Club, Bombay; Sind Club, Karachi.

KENDALL, COMMANDER CHARLES JAMES COPE, D.S.O.; R. I. M.; *b.* 1864; *Educ.:* Epsom. Ent. R.I.M. 1885; served Burma, 1885-89; Marine Survey, India, 1889-97; China, 1900, Somaliland, 1904. *Address:* Port Office, Calcutta.

KERR, JOHN HENRY, C.S.I., C.I.E., I. C. S.; Ch. Sec. to Govt. of Bengal, since 1915; *b.* 1871. *Educ.:* Glasgow Academy and Univ.; Clare Coll., Cambridge. Joined I. C. S., 1892; Settlement Officer, Bihar, 1899; Coll. of Midnapore, 1904; Dir. of Land Rec., Bengal, 1905; Depy. Sec. to Govt. of India, 1907; Rev. Sec. to Govt. of Bengal, 1911. *Publications:* Settlement reports of Saran and Darbhanga; joint-editor of Rampini's Bengal Tenancy Act. *Address:* Government of Bengal, Calcutta.

KETTLEWELL, ARTHUR BRADLEY, C.I.E.; I.C.S.; late Add. Sec. to Govt., Punjab. *Educ.:* Cheltenham; New Coll., Oxford. Ent. I.C.S., 1890; Pol. Offi., Wano, 1898-99. Depy. Commsr., 1903; Sec. to Govt., Punjab, 1903-07. *Address:* Lahore.

KHAIRPUR STATE, H. H. MIR IMAM BAKSH KHAN, RULER OF, G.C.I.E., *Address:* Khirpur State, Bombay Presidency.

KIDD, RALPH; Manager, National Bank of India, Ld., Bombay; *b.* 14 March 1872. *Educ.:* High School, Dundee, Scotland. Entered Union Bank of Scotland, Ltd., Dundee in 1886, afterwards transferred to Glasgow. Joined National Bank of India, Ltd., in 1891, and their Calcutta Office in 1896.

KILBY, REGINALD GEORGE, C.I.E., I.C.S.; Mag. and Coll. Balasore, Bihar and Orissa; since 1912. *Educ.:* Winchester; Pembroke Coll., Oxford. Ent. I.C.S., 1895; Mag. and Coll., 1910. *Address:* Balasore, Orissa.

KINCAID, CHARLES AUGUSTUS, C.V.O.; *b.* 8 Feb. 1870; *Educ.:* Sherborne Sch., Balliol Coll., Oxford. Passed I.C.S. examination, 1889; came out to India, 1891; Pol. Sec., 1910; Agent for Sardars in Deccan, 1914; Dist. and Sess. Judge, Satara, 1913-18; Addl. Judl. Commsr., Sind, 1918; *Publications:* Outlaws of Kathiawar, and The Tale of a Tulsi Plant (Essays on Indian Subjects); Deccan Nursery Tales, 1914; The Indian Heroes, 1915; Ishtur Phakde, 1917. *Address:* Karachi.

KING, CHARLES MONTAGUE, C.I.E.; Depy. Commsr., Punjab, since 1901. *Educ.:* St. Paul's School; Balliol Coll., Oxford. Ent. I.C.S., 1890. Depy. Commsr. 1901. *Address:* Amritsar.

KIRKPATRICK, TEMPLE LIEUT.-GEN. SIR GEORGE MACAULAY, K.C.S.I., C.B.; Ch. of General Staff, Army Headquarters, India since 1916; *b.* 23 Aug. 1866; *s.* of late Sir George Airey Kirkpatrick, K.C.M.G., ex-Lieut.-Governor of Ontario; *m.* 1896, Mary Lydia, 3rd *d.* of late J. F. Dennistoun; *Educ.:* Trinity Coll. School, Port Hope, Canada. Haileybury; R. M. C., Kingston, Canada. Ent. R.E. 1885; Capt. 1894; Major, 1903; Col. 1906; A.D.C. to G.O.C., Thames District, 1892-95; D.A.A.G., S. Africa 1899-1902, D.A.Q.M.G., Canada, 1902-04; Headquarters, 1904-06; G. S. O., 1st Gr., India, 1906-10; served S. Africa, 1899-1902; Eur. War, 1914-15 (from. Maj.-Gen.); passed Staff Coll.; Insp.-Gen., Force of Australia, 1910-14, Dir. Mil. Operations, India, 1914-16. *Address:* Army Headquarters, Simla.

KISHENGARH, H. H. MAHARAJA ADHIRAJ MAHARAJA MADANSINGH BAHADUR, K.C.S.I., K.C.I.E.; *b.* Nov. 1884; *s.* father, late Maharaja Sir Sardul Singh Bahadur, G.C.I.E.; *cr.* 1892; *m.* 2nd *d.* of present chief of Udaipur; served European War, 1914-15, *Address:* Kishengarh, Rajputana.

KISHEN PERSHAD, RAJAYAN-I-RAJAH MAHARAJAH BAHADUR, YAMINUS-SULTANAT, SIR, G.C.I.E., K.C.I.E.; Prime Min. of State of Hyderabad, 1901-12; *b.* 28 Jan. 1864; *m.* four *s.* *Educ.:* Nizam Coll., Hyderabad. Min. of Mil. Dept., 1893-1901. *Decorated* for services rendered to the Hyderabad State. *Address:* City Palace, Hyderabad Deccan.

KITCHEN, ARTHUR JAMES WARBURTON, C.I.E., I.C.S.; Depy. Commsr. Lyallpur, Punjab, since 1904; *b.* 31 Jan. 1870; *Educ.:* Clifton Coll.; Pembroke Coll., Cambridge (B.A.). Ent. I.C.S., 1893. *Address:* Lyallpur Punjab.

KITSON, MAJOR-GENERAL SIR GERALD CHARLES, K.C.V.O., C.B.C.M.G., C.V.O.; Commdg. 2nd Div. India since 1912; *b.* 6 Oct. 1856. *Educ.:* Winchester. Ent. Army, 1875; Lieut.-Col. 1896; D.A.A.G., Meerut, 1890-1892; A.A.G. Umballa, 1892-94; served Manipur, 1891; Staff Coll. 1885-86; late Commdt. of R. M. C. Kingston, Canada; Mil. Att. Brit. Fmb. Washington; Commdt. of R. M. C., Sandhurst, 1902-07; Commdg. Brig., Jubbulpore, 1907; Jullundur, 1908; Q.M.G., India, 1909-12; *Address:* Rawal Pindi.

KNIGHT, MAJ.-GEN. WYNDHAM CHARLES, C.S.I., C.B., D.S.O.; Commdg. Bombay Brigade; *b.* 30 Nov. 1863; *Educ.:* Cheltenham. Served N.-W. F., 1897; Mohmand Exp. as Road Commdt.; Tirah, 1897-98. S. African War, 1900-03; Ch. staff officer, Imp. Yeomanry. *Address:* Queen's Road, Bombay.

KNOWLES, LT.-COL. JOHN GEORGE, C.I.E., V.D.; Commdt., Surma Valley L. H.; Hon. A.D.C. to Viceroy and Govr.-Gen., Cachar; tea planter. *Address:* Surma Valley, Cachar Assam.

KNOX, LT.-COL. STUART GEORGE, C.I.E.; Sen. Jud. Offi., Ind. Exp. Fce.; *b.* 7 Oct 1869; *s.* of Sir George Edward Knox; *m.* 1893, Ethel Laura, *e.* surv. *d.* of Rt. Hon Sir John Edge; two *s.* *Educ.:* Elizabeth Coll. Guernsey; Repton Sch., R.M.C., Sandhurst. Ent.

Army, 1888; Capt. I. A., 1899; Major, 1906; served operations in Mekran, 1898 (despatches). *Address:* Basra, Mesopotamia.

KOLHAPUR, H. H. SIR SHAHU CHHATRAPATI, MAHARAJA OF, G.C.I.E., G.C.S.I., G.C.V.O., LL.D. (Camb); Hon. Col. in Brit. Army; Hon. Col. 103rd Mahratta L. I.; *b.* 26th June 1874; adopted on 17th March 1884, from Kagal Chief's family, being natural born son of Jayasingrao Ghatge Sarjarao Vazarat Ma-ab Chief of Kagal; *m.* Lakshmibai Saheb *g.d.* of sister of H.H. late Ganapatrao Gaikwad, Maharaja of Baroda; two *s.* one *d.* *Educ.:* privately under a European tutor and guardian, Mr. S. M. Fraser, Rajkumar Coll. Rajkote. Has been administering affairs of Kolhapur State from 2nd April 1894. Decorated for loyalty, good government and in recognition of dignity of house. Has salute of 21 guns. *Address:* Kolhapur.

KOTAH, H. H. MAJOR SIR UMED SINGH BAHADUR, MAHARAO OF, G.C.S.I., G.C.I.E., K.C.S.I.; Hon. Lt.-Col. in Army; Hon. Major, 42nd Deoli Regt.; *b.* 1873; *s.* 1889. *Address:* Kotah Rajputana.

KOTLA, HON. RAJA KUSHALPALSINGH OF, M.A. (Cal.), LLB. (All.), LL.D., Ph.D., M.R.A.S., F.R.S.L., F.R.G.S., F.R. His. S, M. R. Num. S., F.R.S.A., M.B.A.S., etc.; *b.* 15 Dec. 1872; *s.* to Kotla estate 1905. Mem. of U. P. Leg. Coun, since 1909. Mem. of Imp. Leg. Coun. as Rep. of landed aristocracy of Prov. of Agra, 1913; Sp. Mag., Vice-Chairman of Agra Dist. Bd.; Chairman of Firozabad Mun.; trustee and Mem. of Managing Comm. of Agra Coll. *Address:* Kotla Fort, P.O. Kotla, Dist. Agra, U.P.

KUTCH, H. H. MAHARAJA DHIRAJ MIRZAN MAHARAO SHRI KHENGARJI SAWAI BAHADUR OF, G.C.S.I., G.C.I.E.; *b.* 16 Aug. 1867; *s.* 1875; *m.* 1884. *Address:* The Palace Bhuj, Kutch.

LAHORE, BISHOP OF, since 1913, RT. REV. HENRY BICKERSTETH DURRANT, M.A., D.D. *Educ.:* Highgate Sch.; Pembroke Coll., Camb.; Ch. Miss. Coll., Islington. Curate of St. Matthew's, East Stonehouse, 1894-95; C.M.S. Missionary, Lucknow, 1896; St. John's Coll., Agra, 1897 Vice-Prin., 1900; Prin., 1911; Fellow, Allahabad Univ., 1906; served European War, Mesopotamia (Kut-el-Amara), 1915 (despatches). *Address:* Bishopsbourne, Lahore.

LAKHTAR, CHIEF OF, THAKOR KARAN SINGHI VAJIRAJJI, C.S.I., 1911; *b.* 1846. *Address:* Lakhtar, Kathiawar Agency, Bombay.

LATIF, CAMRUDIN AMIRUDIN ABDUL, B.A.; Mem. of Sec. of State's Adv. Comm. for Ind. Students; *b.* Cambay, 28 Sept. 1856; *Educ.:* Elphinstone Coll., Bombay; Bombay Univ.; practised as Vakil of Consular Courts, Zanzibar and Mombassa, 1880-93; Legal Adviser to successive Sultans of Zanzibar. Fellow, Bombay Univ.; J.P., Bombay; Hereditary Inamdar, Cambay State. *Address:* Chowpati, Bombay.

LAWRENCE, HENRY STAVELEY, C.S.I., Kaiser-i-Hind Medal; Commsr. in Sind, since 1916; *b.* 20 Oct. 1870; *m.* to Rosamond Napier, *d.* of Col. E. Napier, late Carabineers. *Educ.:* Haileybury, Magdalen College, Oxford. Arrived in India 1890; Under Sec. and Sec. to Govt. of Bombay, 1897-1902; Dir. of Land Records and Agriculture, 1902-06; Collr. in Sind, 1908-13; Commsr., Southern Divn., 1914-16. *Publications:* Paper on Indian Agriculture before the Royal Society of Arts, 1909. *Address:* Government House, Karachi.

LAWSON, ARTHUR ERNEST, C.I.E.; Editor, *Madras Mail*, since 1907; *b.* 30 April 1863; only *surv. s.* of late Sir Charles Lawson. *Educ.:* Dedham Gram. Sch.; Dover Coll. succeeded his father as Sec. of Madras Chamber of Commerce, 1892; Sheriff of Madras, 1911-12. *Address:* Madras.

LE MESURIER, HAVILLAND, C.S.I., C.I.E.; Mem. of Exec. Council, Bihar and Orissa, since 1917; *b.* 22 June 1866; *Educ.:* Rugby; Balliol Coll. Oxford. Entered I.C.S., 1884; Ch. Sec. to Govt. of E. Bengal, 1909; of Bihar and Orissa, 1912-16. *Address:* Cuttack.

LEVETT-YEATS, GERALD AYLMER, C.I.E., I.S.O., V.D.; Factory Supdt., Opium Dept., U.P., since 1903; *b.* 7 March 1863; *Educ.:* private tuition. *Address:* Ghazipur.

LINCOLN, ALBERT GEORGE, I.S.O.; Regr., N.-W. F. Prov. Secretariat, Peshawar, since 1905; *b.* Nov. 1861. *Address:* Peshawar.

LISTER, EDWARD, I.C.S., C.I.E.; Addl. Mem., Bihar & Orissa Leg. Council, and Sec., Rev. and Jud. Dept., since 1918. *Educ.:* Sheffield Gram. Sch.; Wadham Coll., Oxford. Entered I.C.S., 1893. *Address:* Hazaribagh.

LISTON, LT.-COL. WILLIAM GLEN, C.I.E., M.D., D.P.H.; Dir. of Bacteriological Lab., Parel, and Sen. Mem. of Plague Res. Comm., since 1911; *b.* 30 July 1873; Major, 1910: Lt.-Col., 1918. Entered Bacteriological Dept., 1908. *Address:* Parel, Bombay.

LODGE, FRANK ADRAIN, C.I.E.; Insp. Gen. of Forests, Hyderabad (Deccan), since 1914; *b.* 4 Nov. 1861. *Educ.:* Eton. Ent. I.F.S., 1883; Conservator, 1906-14. *Address:* Hyderabad, Deccan.

LOHARU, THE HON. NAWAB SIR AMIR-UD-DIN AHMED KHAN BAHADUR FAKHAR-UD-DAULA, K.C.I.E.; *b.* 1860; *S.* 1884. Ruling Chief of Moghal tribe. For two years mem. of Imp. Leg. Council, and for two years Mem. of Punjab Council: attached to Pol. Dept. in Mesopotamia. *Address:* Loharu, Hissar.

LOVETT, SIR HARRINGTON VERNEY, K.C.S.I., C.S.I.; Mem., Board of Rev., U. P., since July 1918; *b.* 29 April 1864. *Educ.:* Sherborne Sch.; Balliol Coll., Oxford. Ent. I.C.S., 1884; has served in United Provinces. *Address:* c-o H. S. King & Co., Bombay.

LOW, CHARLES ERNEST, C.I.E., B.A.; Sec. to Govt. of India, Com. & Ind. Dept., since Aug. 1918; *b.* 1869. *Educ.:* Rugby; Wadham Coll., Oxford. Ent. I.C.S. 1893.

LUCKNOW, BISHOP OF (since 1910), RT. REV. GEORGE HERBERT WESTCOTT, D.D.; *Educ.:* Marlborough; Peterhouse, Cambridge (M.A.),. Ordained, 1886. *Address:* Bishop's Lodge, Allahabad.

LUNAWADA, MAHARANA SIR SHRI WAKHATSINHJI DALELSINHJI, RAJAH OF, K.C.I.E.; *b.* 11 Aug. 1860; *S.* 1867; a Virpura Solunki Rajput; *Educ.:* Rajkumar Coll.. Rajkot. *Address:* Lunawada, Rewa Kantha, Bombay.

LYALL, FRANK FREDERICK, C.I.E., I.C.S.; Offg. Secy., Bihar and Orissa, since 1912; *b.* 12 June 1872. *Educ.:* Edinburgh Academy; Balliol Coll., Oxford. Ent. I.C.S., 1891. *Address:* Muzzafferpore.

MACARTNEY, SIR GEORGE, K.C.I.E., C.I.E., Brit. Con.-Gen. at Kashgar, Chinese Turkestan, since 1911; *b.* Nankin (China), 19 Jan. 1867. *Educ.:* Dulwich Coll., France. Bachelier és Lettres of Universite de France. Ent. service of Govt. of India, 1889; received thanks of Government of India, 1906. *Address:* Kashgar, Chinese Turkestan, *via* Gilgit (Kashmir).

MACKENNA, JAMES, C.I.E., I.C.S.; Agric. Adv. to Govt. of India, and Dir. of Pusa Inst. *Educ.:* Dumfries Academy; Edinburgh Univ.; Balliol Coll., Oxford. Ent. I.C.S., 1894; Dir. of Agriculture, Burma, 1906. *Address:* Research Institute, Pusa.

MACKENZIE, MAJOR JOHN, C.I.E.; 35th Sikhs; Comptroller of Household to following Viceroys of India; Earl of Minto, 1907-10; Lord Hardinge, 1910-16; Lord Chelmsford, 1916; *b.* 21 Sep. 1876. *Educ.* Merchiston Castle Sch.; R.M.C., Sandhurst. *Address:* Viceregal Lodge, Delhi and Simla.

MACLAGAN, SIR EDWARD DOUGLAS, K.C.I.E., M.A., C.S.I.; Sec. to Govt. of India, Educ. Dept., since 1915; Lt. Governor-Elect., Punjab; *b.* 1864. *Educ.:* Winchester; New Coll., Oxford. Ent. I.C.S., 1885; Under Sec., Govt. of India, Rev. and Agric. Dept., 1892; Ch. Sec. to Govt., Punjab, 1906; Sec. to Govt. of India, Rev. and Agric. Dept., 1910-14. *Address:* Simla.

MACLEOD, JAMES JOHN, C.I.E.; Indigo planter, Tirhoot, India. *Educ.:* Edinburgh Inst. and Univ. of Edinburgh. Lt.-Col., Behar Light Horse. *Address:* Lalseriah, Segowlie, Chumparun.

MACLEOD, HON. NORMAN CRANSTOUN; Puisne Judge, High Court, Bombay, since 1910. *b.* 16 July, 1866. *Educ.:* Wellington Coll.; New Coll., Oxford. Called to Bar, 1890; Offi. Assignee, Bombay, 1900; Mem. of Imp. Leg. Council, 1908. *Address:* Mount Pleasant Road, Bombay; St. Margaret's, London Road, Guildford.

MACTAGGART, COLONEL CHARLES, C.I.E.; Insp.-Gen. of Civil Hosp. U.P., *b.* 1861. *Educ.:* Campbeltown Gram. Sch.; Glasgow Univ. Ent. I.M.S.; 1886; Insp.-Gen. of Prisons, 1902; Mem., Indian Factory Labour Commission, 1907-08; Mem. of U.P. Leg. Council, 1909. *Address:* Lucknow.

MACWATT, LT.-COL. ROBERT CHARLES, C.I.E.; *b.* 22 Jan. 1865. San. Commsr., Ch. Malaria and Plague Med Officer and Insp.-Genl., Civil Hosps., Punjab; Mem., Punjab Leg. Council. *Address:* Lahore.

MCBAIN, JAMES ANDERSON DICKSON, C.I.E., J.P.; Manager for India Sun Life Assurance Co. of Canada; *b.* 24 April 1869. *Educ.:* Arbroatha H. Sch.; Mem. of Leg. Council Bombay, 1913-1916; Mem., Bombay Mun. Corp., since 1904 and President, 1917-18. *Address:* 13 Marine Lines, Bombay.

MCPHERSON, HUGH, B.A.; *b.* 3 May 1870; *Educ.:* Paisley Gram. Sch.; Glasgow Univ. Balliol Coll., Oxford. Passed into I.C.S., 1889; arrived India, 1891; Rev. Sec., Bihar and Orissa, 1912-15; Ch. Sec., Bihar and Orissa, since 1915. Addl. Mem. Prov. Leg. Council, *Address:* Patna and Ranchi.

M'CONAGHEY, LT.-COL. ALLEN, C.I.E.; Pol. Ag. and Dy. Commsr. in Quetta-Pishin, since 1907; *b.* 31 Mar. 1864; Ent. army, 1884. *Address:* Quetta-Pishin, Baluchistan.

M'IVER, JOHN ALEXANDER, I.S.O.; Supdt., Govt. Photozincographic Dept., Bombay C. S.; Land Rec. Dept., since 1906; *b.* 10 Sep. 1859. *Educ.:* privately; Yorkshire. Joined the B. C. S., 1880. *Address:* Poona.

M'WILLIAM, ANDREW, D. Met., A.R.S.M.; Metallurgical Insp. to Ind. Govt; services lent as Metallurgical Advisor to Tata Iron and Steel Co., Ltd., Jamsedpur; late Asst. Prof. of Metallurgy in Univ. of Sheffield. *Educ.:* Allan Glen's Sch.. Glasgow; Roy. Sch. of Mines, London. In 1887 took Associateship of Roy. Sch. of Mines, 1st Class in Metallurgy. *Address:* Kalimati, B. N. Railway.

MADGE, WALTER CULLEY, J.P., C.I.E.; *b.* 27 Jan. 1841; *Educ.:* High Sch., Edinburgh. Ex-President, Anglo-Indian Association; Ex-Member, Viceroy's Leg. Council; Mem., Royal Commission Indian Public Services, 1912. *Address:* Calcutta.

MADHAVA RAO, V.P., C.I.E.; Dewan of Baroda since 1914. For 34 years in service of Mysore State in important capacities, being Mem. of Council of Regency, 1898-1902; Member of Exec. Council and Rev. Commsr.; Dewan of Travancore, 1904-06; Dewan of Mysore, 1906-09. *Address:* Baroda.

MADHAVLAL, SIR GIRIJA PRASAD, Bt.; *see* Runchorelal.

MADRAS, BISHOP OF, since 1899, RT. REV. HENRY WHITEHEAD, D.D.; *b.* 19 Dec. 1853; *Educ.:* Sherborne; Trinity Coll., Oxford (Fellow; Lecturer, 1878-82; Tutor, 1882-03). Ordained 1879; Principal of Bishop's Coll., Calcutta, 1883-99; Superior of Oxford Mission, Calcutta, 1890-99. Acting Metropolitan, 1919. *Address:* Bishop's House, Madras.

MAFFEY, JOHN LOADER, C.I.E., I.C.S.; Priv. Sec. to Lord Chelmsford; *b.* 1 July 1877; *Educ.:* Rugby; Christ Church, Oxford. Ent. I.C.S., 1899. *Address:* Viceregal Lodge, Simla.

MAHALANOBIS, S. C. B. Sc., F.R.S.E. F.R.M.S.; Prof. of Phy iology, and Dean, Presidency Coll., Calcutta, since 1900; *b.* Calcutta, 1867. *Educ.:* Edinburgh Univ. *Address:* 210, Cornwallis Street, Calcutta.

MAHDI HASAN, M.A. (Cantab.), I.S.O.; Barrister (Inner Temple); Dy. Commsr., C.P. *b.* 1859. *Address:* Drug, C.P.

MAHDI HUSAIN, KHAN WAHUD-UD-DAULA, AZOD-UL-MULK, NAWAB MIRZA, KHAN BAHADUR, C.I.E.; *b.* 1834. *Educ.:* India; Arabia. Travelled extensively in Arabia, Persia, Afghanistan, Baluchistan, and Europe; visited Mecca, Medina, Kaymiani. *Address:* Tirminigaz, Lucknow.

MAHUMUDABAD, RAJA OF, SIR ALI MOHAMMAD KHAN, KHAN BAHADUR, K.C.I.E.; Member of Imp. Leg. Council; Pres. of All India Mo lim League; President of Mo lim Univ. Ass. *b.* 1877. *Educ.:* privately. *Address:* Mahmudabad House, Kaiserbagh, Lucknow.

MAHOMED, KHAN BAHADUR, NAWAB SYED, I.S.O.; Ent. Govt. Service, 1873; Insp.-Gen. of Registration, Bengal; retired, 1913; a distinguished Urdu scholar and dramatist; wrote The Nawabi-Darbar, first drama in Urdu on English lines. *Address:* 82, Toltollati Lane, Calcutta.

MALAVIYA, HON. PANDIT MADAN MOHAN; President of National Congress, 1909 and 1918; *b.* Allahabad, 25 Dec. 1862; *Educ.:* privately in Hindi and Sanskrit; Muir Central Coll., Allahabad. Edited *The Hindustani*; LL.B., Allahabad Univ, 1892; Member, Prov. Leg. Council, 1902-12; Member, Imp. Leg. Council, since 1910. *Address:* Allahabad.

MALER KOTLA, HON. KHAN, SIR ZULFIGAR ALI KHAN, K.C.S.I., C.S.I.; estate holder in Maler Kotla State; member of Imp. Council representing Mohamedan community of Punjab; Ch. Minister of Patiala State, since 1911; *b.* 1875; *Educ.:* Chiefs Coll., Lahore; Cambridge; Paris. *Address:* Lahore.

MALIK MOHAMMED UMAR HYAT KHAN (TIWANA), CAPTAIN HON. SIR, K.C.I.E., C.I.E., M.V.O.; Member of Imp. Council, since 1910; Hon. Major in Army, 1917; *b.* 1875. *Educ.:* Chiefs' Coll., Lahore. One of largest landholders in Punjab. Attaché to H.M. the Amir, 1907; Deputy Herald, Delhi Durbar, 1911. *Address:* Kalra, Shahpur.

MALLIK, DEVENDRA NATH, B.A. (Cantab); Sc. D. (Dub.), F.R.S.E.; Prof. of Mathematics, Presidency Coll., Bengal, since 1908; *b.* Bengal 1866. *Educ.:* St. Xavier's Coll., Calcutta; Univ. Coll., London.; Peterhouse, Cambridge. *Publications:* Numerous works on Mathematics. *Address:* Astronomical Observatory, Presidency College, Calcutta.

MALLIK, MANMATH C.; *b.* Oct. 1853; called to Bar, 1875; contested (L.) St. Georges Hanover Square, 1906; Oxbridge Division, 1910; Fellow, Zoological Society of London. *Address:* 241 Lower Circular Road, Calcutta.

MANIPUR, RAJA CHURA CHAND, RAJA OF; *b.* 1886; *S.* 1891. State has area of 8,000 sq. miles, and a population of 284,465. Salute 11 guns. *Address:* Manipur, Assam.

MANGALORE, R. C. Bishop of; *see* Perini

MANN, HAROLD HART, D. Sc., F.I.C., F.L.S., Principal, Agricultural College, Poona and Agricultural Chemist to Govt. of Bombay, since 1901; *b.* 16 Oct. 1872; *Educ.:* Elmfield Sch., York; Yorkshire Coll., Leeds, Pasteur Inst., Paris; Chemical Asst. for Research to R. A. S. 1895-98; Scientific Officer to Ind. Tea Assoc., Calcutta, 1900-07. *Publications:* Numerous, on questions relating to tea culture and manufacture, and many other Indian agricultural questions (with Sir G. Watt); The Pests and Blights of the Tea Plant; also on sociological subjects. *Address:* Agricultural College, Poona.

MARRIS, SIR WILLIAM SINCLAIR, K.C.I.E.; Joint Secy., Govt. of India, Home Dept. *b.* 1873; *Educ.:* Wanganui, N.Z.; Canterbury Coll., N.Z.; Christ Church, Oxford. Passed I.C.S., open, 1895; Under Sec. to Govt. of India, 1901; Dy. Sec. to Govt. of India, 1904; service lent to Transvaal Govt., 1906; C.S. Commsr., Transvaal, 1907; Ag. Secy. to Govt. of India, Home Depart., March to May 1913; Ag. Insp.-Gen. of Police, U.P. 1916; Spec. duty in connection with Montagu-Chelmsford Reforms Scheme, 1917-18. *Address:* Simla.

MARTEN, HON. MR. JUSTICE AMBRESON BARRINGTON, LL.D., M.A.; Puisne Judge of Bombay High Court, since 1916; *b.* 8 Dec. 1870; *e. s.* of late Sir Alfred Marten, K.C., M.P. *Educ.:* Eton; Trinity College, Cambridge (1st Class Law Tripos); Called to Bar Inner Temple, 1895; Mem. of Bar Council, 1909-10.; practised in Chancery Division, 1916. *Address:* High Court, Bombay.

MASANI, RUSTOM PESTONJI, M.A., J. P., Kaiser-i-Hind Silver Medal; Mun. Sec., Bombay; *b.* 23 Septr. 1876. *Educ.:* New H. S. and Elphinstone Coll. Jt. Propr. and Editor of *Gup Sup.* (1898); Editor of English columns of *Kaiser-i-Hind* (1899-1900); Editor, *Indian Spectator* (1901-02). Was Hon. Sec to Bombay Food Prices Committee (1914-17); *Publications*—English; Child Protection; Folklore of Wells. Gujarati: *Dolalno Upayog* (Use of Wealth); *Gharni tatha nishalni keluvni* (Home and School education); *Jansukh mala* (Health series); and novels named *Abyssiniano Habshi*; *Bodhbi Chandra Chal.* *Address:* Versova (*via* Andheri Station).

MAUDE, WALTER, C.S.I.; *Educ.:* Highgate Sch.; Balliol Coll. Oxford. Ent. I.C.S., 1881; Commissioner, 1905; Mem., Board of Rev., Bihar and Orissa, 1912-17; Mem., Exec. Council, since, 1917; Mem, Prov. Leg. Council. *Address:* Ranchi.

MAW, WILLIAM NAWTON, C.I.E., I.C.S.; Offge. Commsr., Nerbudda Div. C. P., since Feb. 1918; *b.* 1 Aug. 1869; *Educ.:* Wesley Coll., Sheffield; St. John's Coll., Cambridge (B.A.), Ent. I.C.S., 1893; in Secretariat respectively, as third, second, and Chief Secretary, 1906-12. *Address:* Hoshangabad.

MAXWELL, SIR WILLIAM, K.C.I.E., C.I.E. M.V.O.; lately Director-General of Posts and Telegraphs; *b.* 3 Jan. 1870; *m.* 1894, Elizabeth, *d.* of D. Harper. *Educ.:* Queen's Coll, Belfast; Trinity Coll., Dublin. Ent. I.C.S., 1889; Add. Mem. of Viceroy's Council. *Address:* Simla, India. *Club:* East India United Service.

MEARES, J. WILLOUGHBY, F.R.A.S., M. INST. C.E., M.I.E.E.; Electrical Adv. to Govt. of India, since 1904; *b.* 1871. *Educ.:* Winchester; Univ. Coll., London. *Address:* Electrical Adviser's Office, Simla.

MEHTA, KHAN BAHADUR, SIR BEZONJI DADABHOY, KT. *Address:* Nagpur.

MEHTA, MANUBHAI NANSHANDKAR, M.A., LL.B.; Diwan (Prime Minister) of Baroda since 1916; *b.* 22 July 1868; *Educ.:* Elphinstone Coll., Bombay. Priv. Sec. to Gaekwar, 1899-1905; Rev. Min. and First Counsellor, 1914-16. *Address:* Baroda.

MEHTA, ROOSTUMJEE DHUNJEEBHOY, J.P., C.I.E.; Merchant; Sheriff of Calcutta, 1893; Consul for Persia at Calcutta, 1899-1904. *Address:* 9, Rainey Park, Ballygunge, Calcutta.

MEKRAN, NAZIM OF, C.I.E.: a tribal chief of Baluchistan, whose territory forms the northern littoral of Gulf of Oman. *Address:* Mekran, Baluchistan.

MEREDITH, RICHARD, C.I.E.; Dy. Dir.-Gen. (Tel. Traffic), 1914-18; Ch. Eng., Telegraphs, Simla, 1918. *b.* 21 May 1867; *e. s.* of late Sir James Creed Meredith. *Educ.:* Royal Sch., Armagh; Trinity Coll., Dublin; R.I.E. Coll. *Address:* Simla.

MESSENT, PHILIP GLYN, M. INST. C.E., C.I.E.; Chief Engineer, Bombay Port Trust. *b.* 26 June 1862. *Educ.:* Charterhouse. Articled pupil and Assistant to his father Philip J. Messent, M. Inst. C.E. Ch. Eng. to Tyne Improvement Commissioners, 1880-84; Asst. Eng. to Bombay Port Trust, 1884-99, Ch. Eng. since 1899; has carried out many important works, including Alexandra Dock (50 acres) and Hughes Dry Dock, also construction of Port Trust Railway and Mazagon-Sewree Reclamation. *Address:* Bombay Port Trust, Bombay.

MESTON, SIR JAMES SCORGIE, K.C.S.I., C.S.I., LL.D. (Aberdeen), V.D.; Lieut.-Governor, United Provinces, Agra and Oudh, 1912-18; Finance Mem., Govt. of India, 1918; *b.* 12 June 1865; *m.* 1891, Jeanie (a Lady of Grace, St. John of Jerusalem); *o. d.* of James M'Donald; one *s. Educ.:* Grammar Sch. and Univ. Aber. Balliol Coll., Oxford. Ent. I.C.S. 1885; Fin. Sec. to Govt. U. P., 1899-1903, Adviser to Govts. of Cape Colony and Transvaal on civil service reform, 1904-06; Temp. Fin. Mem. of Viceroy's Council, 1908; Sec. to Fin. Dept., Govt. of India, 1906-1912; a representative of India, Imp. War Con., 1917. *Address:* Delhi and Simla.

MEULEMAN, MOST REV. BRICE, S.J.; Catholic Archbishop of Calcutta, since 1902; *b.* Ghent, 1 March 1862. *Educ.:* St. Barbe's Coll., Ghent. Joined Soc. of Jesus, 1879; nominated Superior of Jesuit Mission in Bengal, 1900. *Address:* Calcutta.

MILLER, HENRY, C.I.E.; Mem., Leg. Council, Assam. *Address:* Shillong, Assam.

MILLER, SIR THOMAS FREDERICK DAWSON, KT., K.C., Ch. Justice of Patna High Court, since 1917; *b.* Dec. 1867; *Educ.:* Durham Sch. and Trinity Coll., Oxford; Bar, Inner Temple, 1891. *Address:* High Court, Patna.

MINCHIN, LT. COL. ALFRED BECKETT, C.I.E.; 1st Asst. Resident, Hyderabad, since 1908; *b.* 3 Dec. 1870. Ent. army, 1891; Captain, 1901; Major, 1909; served Isazai Exp., 1892; Chitral R. I. For., 1895; Malakand and Swat, 1897; Asst. to Gov.-Genl's Agent, Rajputana, 1898-1904; Pol. Ag. Bundelkund, 1902; Sec. to Gov. of India, For. Dept., 1908. *Address:* Hyderabad.

MINCHIN, LT.-COL. CHARLES FREDERICK, D.S.O.; Div. and Sess. Judge, Derajat, since 1911; *b.* 22 Sept. 1862; *Educ.* Cheltenham U.S. Coll., Westward Ho; R. M. C., Sandhurst. Joined Ind. Staff Corps, 1885; Pol. Ag. Dir, Swat, Chitral, N.-W. F. Prov., 1907-08; Dy. Commsr., Bannu, 1908-11; served with S. African F. F., 1899-1902; *Address:* Dera Ismail-Khan.

MITRA, SARADA CHARAN, M.A., B.L.; *b.* 19 Dec. 1848. *Educ.:* Hare Sch. Presidency Coll., Calcutta; officiated as Judge of Calcutta High Court, 1902; Puisne Judge, Calcutta, H. C., 1904-09. *Address:* 85, Grey Street, Calcutta; Panisehola P.O., District Hooghly.

MODY, HORMUSJI PEROSHAW, M.A. (1904), LL.B. (1906); Advocate, High Court, Bombay; *b.* 23 Sept. 1881; *Educ.:* St. Xavier's Coll. Bombay. Mem. of Bombay Mun. Corp. and its Standing Committee. *Publications:* The Political Future of India (1908). *Address:* Cumballa Hill, Bombay.

MOIR, THOMAS EYEBRON, C.I.E.; Priv. Sec. to Gov. of Madras. *Educ.:* Fettes Coll., Edinburgh; Wadham Coll., Oxford. Ent. I.C.S., 1897. *Address:* Goverment House, Madras.

MOKSHAGUNDUM VISVESVARAYA, SIR; K.C.I.E., B.A., L.C.E., M.I.C.E., late Dewan of Mysore; *b.* 15 Sept. 1861. *Educ.:* Central Coll., Bangalore, and Coll. of Science, Poona. Asst. Engineer, P.W.D. Bombay, 1884; Exec. Eng. 1899; Supdt. Eng. 1904; retired 1908. Apptd. Sp. Consulting Eng. to Nizam's Govt 1909; Ch. Eng. and Sec. P. W. and R. Depts. Govt. of Mysore, 1909; App. Dewan of Mysore Nov. 1912. *Address:* Bangalore.

MOLONY, JOHN CHARTRES, M.A., I.C.S.; President, Madras Corporation, since 1914; *b.* 27 Feb. 1877; *Educ.:* Port Royal Sch., Enniskillen; Trinity Coll., Dublin. Asst. Pol. Agent, Banganapalle State, 1905-09; Supdt. of Census, Madras, 1910-11; *Address:* Ripon Buildings, Madras.

MONIE, PETER WILLIAM, M.A. (Glasgow), B.A. (Oxon.); Municipal Commissioner, Bombay; *b.* 30 March 1877; *Educ.:* Irvine Royal Acad.; Glasgow Univ.; Balliol Coll., Oxford; I.C.S., Asst. Collr. Asst. Judge; Under-Sec. to Govt.; Under Sec. to Govt. of India, Home Dept; Ag. Collr. Sec. to Govt., General Dept. *Address:* 16, Mount Pleasant Road, Malabar Hill.

MONRO, GEN. SIR CHARLES CARMICHAEL, G.C.B., G.C.M.G., Grand Officer, Legion of Honour; Commander-in-Chief, India, since 1916; commdg. 1st Army Corps, 1915-1916; *b.* 15 June 1860; *m.* 1912, Hon. Mary Towneley O.'Hagan, *d.* of 1st Baron O'Hagan. Ent. army, 1879; Col. 1903; Lt.-Gen. 1915; Gen. 1917; *Address:* Delhi; 20, Eccleston Square, S. W.

MOOKERJEE, SIR ASUTOSH SARASWATI, SASTRAVACHASPATI, Kt., C.S.I., M.A., D.L., D.Sc.; *ex* Judge of Calcutta High Court since 1904; Vice-Chancellor of Univ. of Calcutta, since 1906; *b.* 28 June 1864; *Educ.:* S. Suburban Sch.; Presidency Coll.; City Coll.; Fellow and Syndic of Calcutta Univ. since 1889; Add. Mem. of Imp. Council, 1903-04; Fellow of numerous learned societies. *Address:* 77, Russa Road North, Bhowanipur, Calcutta.

MOOKERJEE, HON. SIR RAJENDRA NATH, K.C.I.E., C.I.E.; Civil Engr.; *b.* 1854; *Educ.:* London Missionary Sch. at Basirhat; Presidency Coll., Calcutta. Senior Partner to Martin & Co., Calcutta; Mem. of Indian Industrial Commission; of Bengal Leg. Council; of Board of Trustees for Improvement of Calcutta; a Fellow of Calcutta Univ.; Mem. of Court of Visitors, Ind. Inst. of Science; Sheriff of Calcutta, 1911; Mem., Bengal Leg. Council. *Address:* 7, Harington Street, Calcutta.

MOOKERJI RADHAKUMUD, M.A., M.R.A.S.; *b.* 20 Jan. 1881; *Educ.:* Krishnath Coll., Berhampore; Presidency Coll., Calcutta. Mem. of Governing Body, Hindu Univ. Soc. and of National Council of Education and other bodies. *Address:* Berhampore, Bengal.

MOORE, PIERCE LANGRISHE, C.I.E.; Insp. Gen. of Police, Madras, since 1914; *Educ.:* Cheltenham; Christ Church, Oxford. Ent. I.C.S., 1896; President, Madras Corporation, 1910-14. *Address:* Madras.

MORVI, H. H. THAKUR SAHEB SIR WAGHJI RAVAJI, G.C.I.E.; *b.* 7 April 1858; S. 1870. *Educ.:* Rajkumar Coll. State has area of 822 sq. miles and population of about 90,000. *Address:* Morvi, Kathiawar.

MOUNTFORD, LEWIS JAMES, C.B.E.; Commissioner, Southern Division, Bombay Presidency. *b.* 1 August 1871. *Educ.:* Dulwich Coll. and Pembroke Coll., (Cantab). Joined I.C.S. Asst. Collr., 1892; Manager of Sind Encumbered Estates, 1896; Collr. of Larkhana, 1903; Spl. Collr., Bombay 1905; Collr., Sholapur, 1907; Satara, 1911 Poona, 1913; Ahmedabad, 1916. *Publications:* Pamphlet on the Relations between Debtor and Creditor in Sind. *Address:* Belgaum.

MUDDIMAN, ALEXANDER PHILLIPS; C.I.E. Sec. to Govt. of India, Leg. Dept., since 1915; Addl. Mem., Imp. Leg. Council *b.* 14 Feb. 1875. *Educ.:* Wimborne Sch. Ent. I.C.S., 1897; served in Behar in various capacities. Dy. Sec., Govt. of India, Leg. Dept., 1910-15.

MUDHOLKAR, HON. RAO BAHADUR RANGNATH NARSINH, C.I.E., B.A., LL.B.; Pres. Ind. Nat. Congress, 1912; Advocate, Central Provinces and Berar; Pres., Amraoti City Municipality; *b.* 16 May 1857. *Educ.:* Dhulia High Sch.; Elphinstone Coll., Bombay (Fellow). Pres., Ind. Industrial Confce. 1908; Delegate of Ind. Nat. Congress to England, 1890; Mem., Imp. Council, 1910-12; Mem., C. P. Council, since 1914. *Address:* Amraoti.

MULJI, VASANJI TRIKAMJI, RAO SAHIB, SIR Kt., J.P.; Hon. Magistrate; Mem. Bombay Cotton Exchange; *b.* 8 July 1866. *Address:* Malabar Hill, Bombay.

MULLICK, HON. MR. JUSTICE BISANTA KUMAR; Judge, Patna High Court, since 1916 *Educ.:* Univ. Col. Sch.; King's Coll., Cambridge. Ent. I.C.S., 1887; Actg. Judge Calcutta High Court, 1913; Puisne Judge 1915. *Address:* Bankipore.

MUMTAZUD DOWLAH MUHAMMAD FAIYAZ ALI KHAN, NAWAB OF PAHASU K.C.V.O.; Minister, Jaipur State, *b.* 4 Nov 1851; late member of Supreme and Provincial Legislative Councils. *Address:* Nawab's House, Jaipur.

MURSHEDABAD, NAWAB BAHADUR OF K.C.S.I., K.C.V.O., The Hon. Ihtisham-ul-Mulk, Rais-ud-Dowla, Amir-ul-Omrah, Nawab Asef Kudr Syud Wasef Ali Meerza, Khan Bahadur, Mahabut Jung; premier noble of Bengal, Behar and Orissa; 38th in descent from the Prophet of Arabia; *b.* 7 Jan. 1875 *m.* 1898, Nawab Sultan Dulin Fugfoor Jahan Begum Saheba. *Educ.:* in India, under private tutors and in England, at Sherbourne Rugby, and Oxford; has six times been Mem. of Bengal Leg. Council; was selected to represent Bengal at King's Coronation in London; is reputed for efficient management of his estates and public charities *Address:* The Palace, Murshidabad.

MURTRIE, DAVID JAMES, I.S.O.; Dy. Dir.-Gen., Post Offices, since 1917; *b.* 18 Dec. 1864 *Educ.:* Doveton Prot. Coll., Madras. Ent Govt. Service in Post Office, 1884; Pres Postmaster, Bombay, 1913-16. *Address:* G.P.O., Simla.

MURZBAN, MUNCHERJEE COWASJEE, KHAN BAHADUR, C.I.E.; *b.* 7 July 1839. *Educ.:* Elphinstone Inst., Bombay; Poona Coll. Poona Sch. of Engineering. Rendered distinguished service in P. W. D.; Ex. Eng. of

Bombay City, till 1903; President of Bombay Corporation, 1890; Sheriff of Bombay, 1906. *Address:* Gulestan, Murzban Road, Bombay.

MUSPRATT-WILLIAMS, Lt.-Col. Charles Augustus, C.I.E., R.G.A.; Ch. Insp. of Explosives with Govt. of India since 1898; *b.* 13 Sep. 1861. Ent. Army, 1881; Lieut.-Col. 1909. *Address:* Explosives Office, Calcutta or Simla.

MYSORE, H.H. Maharaja of, Sri Krishnaraja Wadiyar Bahadur, G.C.S.I.; *b.* 4 June 1884; *s.* father, 1895. Invested with full ruling powers by Lord Curzon, at Mysore, 1902; present at Delhi Durbar, 1903. Area of State is 29,444 square miles, and has population of nearly 6,000,000. *Address:* The Palace, Bangalore, Mysore; Fern Hill, Ootacamund.

MYSORE, Yuvaraja of, Sir Sri Kantirava' Narasimharaja Wadiyar Bahadur, G.C.I.E. K.C.I.E.; Extraordinary Mem. of Council in Mysore; *b.* 5 June 1888; *y. s.* of late Maharaja Sri Chamarajendra Wadiyar Bahadur. Takes keen interest in welfare of people and in all matters of education, health, and industry. *Address:* Mysore.

NABHA, Maharaja Sri Ripudaman Singhji Malavendra, Bahadur of, F.R.G.S.; M.R.A.S.; *b.* 14 March 1883; *S.* 1911. *Educ.:* privately. Travelled good deal in India and abroad; Mem., Viceroy's Council 1906-08; Pres. of Ind. Nat. Soc. Confce., 1909; attended Coronation of King, accompanied by Maharani, 1911; made handsome contributions towards various War Funds and Loans including gift of fully-equipped Hospital Ship for Mesopotamia. *Address:* Nabha, Punjab.

NAGOD Raja Jadubind Singh, Raja of; *b.* 30 Dec. 1855; *S.* 1874; dynasty has ruled at Nagod for over nine centuries; State has area of 501 square miles, and population of 84,097; salute 9 guns. *Address:* Nagod, Baghelkhand.

NAGPUR, Bishop of, since 1903, Right Rev. Eyre Chatterton, D.D., F.R.G.S.; *b.* 22 July 1863; *Educ.:* Haileybury; Dublin Univ.; ordained 1887. *Address:* Bishop's House, Nagpur.

NAGPUR, R. C. Bishop of; *see* Coppel.

NAIDU, Sarojini; Fellow of Roy. Soc. of Lit. in 1914; *b.* Hyderabad, Deccan. *Educ.:* Hyderabad; King's Coll., London; Girton Coll., Cambridge. Published three volumes of poetry in English, which have been translated into all Indian vernaculars, and some into other European languages; also been set to music; lectures and addresses on questions of social, religious, and educational and national progress; specially connected with Women's Movement in India, and welfare of Indian students. *Address:* Hyderabad, Deccan.

NAIR, *see* Sankaran Nair.

NANAK CHAND, Masherud-Dowla, Rai Bahadur, C.S.I., C.I.E., Sirdar and Jagirdar of Indore State; *b.* 1860; *Educ.:* Delhi and Indore. Minister, Indore State, 1895-1913 (except for ten months); *Address:* Santoshkuti, Indore; Mohalla Dassa, Delhi.

NANJUNDAYYA, H. Velpanuru, C.I.E.; *b.* 13 Oct. 1860; *Educ.:* Wesleyan Mission Sch. Mysore; Christian Coll., Madras; Madras Univ. (Fellow, 1895). Ent. service of Mysore Govt. 1885; Judge, Chief Court of Mysore, 1904; Mem. of Council and Ch. Judge of Chief Court; retired 1916; Vice-Chancellor, Mysore Univ. *Address:* Mallesvaaram, Bangalore.

NARAINA RAU, Kalle Diwan Bahadur; Sen. H. C. Vakil, Madras, *b.* 1862; *Educ.:* Govt. Coll., Mangalore; Presidency Coll., Madras. Ent. Bar, 1885, Prof. of Madras Law Coll., 1891-1903, and for a time its Principal. *Address:* Coleman's Gardens, Vepery, Madras.

NARIMAN, Sir Temulji Bhicaji, Kt., Chief Physician, Parsi Lying-in Hospital; Vice-President, College of Physicians and Surgeons; *b.* Naosari, 3 Sep. 1848; *Educ.:* Grant M. C.; Elphinstone Coll.; Fellow of Bombay Univ, 1883; J.P.; a Syndic in Medicine, 1891; a Dean in Faculty of Medicine, 1901-02; mem. Bombay Leg. Council, 1909; mem. of Provincial Advisory Committee, 1910. *Address:* Bombay.

NARSINGARH, H. H. Sri Huzur Raja Sir Arjun Singhji Sahib Bahadur of, K.C.I.E.; *b.* 10 Jan. 1887; belongs to Paramar or Ponwar branch of Agnikal Rajputs; *S.* 1897. *Educ.:* Mayo Coll.; Imp. Cadet Corps. Invested 1909; State is 734 sq. miles in extent, and has population of 109,854; salute of 11 guns. *Heir:* *s.* Shri Maharaja Kumar Shri Vikram Singh Bahadur, *b.* 21 Sept. 1909. *Address:* Narsingharh.

NATARAJAN, Kamakshi, B.A. (Madras University) 1889; Editor, *The Indian Social Reformer*, Bombay; *b.* 24 Sept. 1868. *Educ.:* St. Peter's H. S., Tanjore; Pres. Coll., Madras; Govt. Coll., Kumbakonam; and Law Coll. Madras. Headmaster, Aryan H. S. Triplicane, Madras; Asst. Editor, the *Hindu*, Madras; Fellow of Bombay Univ. and Mem. of Syndicate (1918); Mem., Bandra Municipality; Pres., Madras Prov. Soc. Confce., Kurnool, 1911; and Pres., Bombay Prov. Soc. Confce. Bijapur, 1918. *Publications:* Presidential addresses at above conferences: Report of Census of Hyderabad (Deccan) 1911. *Address:* *The Indian Social Reformer* Office, Fort, Bombay, and Tata's Bungalow, Khar Road, Bandra, Bombay.

NATHUBHAI, Tribhovandas Mangaldas, J.P.; Hon. Mag. and Fellow of Univ., Bombay; Sheth or head of Kapol Banya community; resigned presidentship after tenure thereof for 25 years, 1912. *b.* 28 Oct. 1856. *Educ.:* St. Xavier's Coll., Bombay. Was for 20 years an elected Mem. of Bombay Mun. Corpn; has been Hon. Mag. since establishment of Courts of Bench Magistrates in Bombay. *Address:* Sir Mangaldas House, Lamington Road, Bombay.

NAWANAGAR, H. H. Maharaja Jam Saheb of, Kumar Shri Ranjitsinhji, K.C.S.I.; Hon. Major in army; *b.* Sarodar, 10 Sept. 1872; *Educ.:* Rajkumar Coll., Rajkot; Trinity Coll., Cambridge. First appearance for Sussex C. C. C., 1895; head of Sussex

averages same year; head of Sussex averages, 1895-1902; champion batsman for all England in 1896 and 1900, scoring 2780 runs with an average of 59·91; went with Stoddart's All England XI. to Australia, 1897-98; served European War, 1914-15; lent his house at Staines as hospital for wounded soldiers during European War. *Address:* Nawanagar, Kathiawar; Thorncote, Staines.

NEPAL, MAHARAJA SIR CHANDRA SHUM SHERE JUNG BAHADUR RANA, G.C.B., G.C.S.I., G.C.V.O., D.C.L., (Oxon, 1908): F.R.G.S., Hon. Lieut.-Gen. in British Army; Hon. Colonel of 4th Gurkha Rifles · Thong-lin-pimura-kokang-wang-syan (Chinese 1902); Prime Minister and Marshal of Nepal; *b.* 8 July 1863. *Educ.:* Durbar H. S., Kathmandu. Entered army as a Colonel: Commander-in-Chief, 1901; Maharaja, Prime Minister, and Marshal 1901; during European War, 1914, presented 31 machine guns, first gift of munitions, to the King, and placed whole of military resources of State at King's disposal. *Address:* Singha Durbar, Kathmandu, Nepal.

NETHERSOLE, SIR MICHAEL, KT., C.S.I.; Insp.-Gen. of Irrigation, 1912-17; retired 1917; Ch. Hydraulic Engineer to Andhra Valley Power Supply Co., Ltd., also Consulting Hydraulic Engineer to Messrs. Tata, Sons, Ltd., Bombay; *b.* 24 Apr. 1859; *Educ.:* Sutton Valence; R.I.E. Coll.; Ent. P. W. D., 1880; Exec. Eng., 1892; lent to Kashmir State, 1893-1900; Ch. Eng. and Sec. to Govt., U. P., 1900-11. *Address:* Bombay.

NEWBOULD, HON. MR. BABINGTON BENNETT; Puisne Judge, High Court, Calcutta, since 1916; *b.* 7 March 1867. *Educ.:* Bedford Sch.; Pembroke Coll., Cambridge. Ent. I.C.S., 1885. *Address:* 10, Harington Mansions, Calcutta.

NIHAL SINGH, REV. CANON SOLOMON, B.A.; Evangelistic Missionary; *b.* 15 Feb. 1852; *Educ.:* Govt. H. S., Lakhimpur; Canning Coll., Lucknow, ordained 1891; Hon. Canon in All Saints' Cathedral, Allahabad, 1906. *Address:* 2, Pioneer Road, Allahabad.

NOLAN, JAMES JOSEPH; journalist; Editor of *Rangoon Times*, since 1915; *b.* Limerick, 7 May 1869. *Educ.:* Crescent Coll., Limerick; King's Coll., London. Asst. Editor, *Hearth and Home*, 1897; Editor, 1906-12; late Editor of *The Citizen*; Editorial staff, *Black and White*, 1903-12; Asst. Editor of *Canada*, 1912-14. *Address:* The *Rangoon Times*, Rangoon.

NORMAND, ALEXANDER ROBERT, M.A., B.Sc.; Prof. of Chemistry, Wilson Coll., Bombay. *b.* Edinburgh, 4 March 1880; *Educ.:* Royal H. S. and Univ., Edinburgh. *Address:* Wilson College, Bombay.

NUNDY, SIR MANINDRA CHANDRA, K.C.I.E.; *ex*-Add. Mem. of Imp. Council. *Address:* Calcutta.

OBAIDULLA KHAN, NAWABZADA HAFIZ MOHAMAD BAHADUR, C.S.I.; Col.-in-Ch. Bhopal Victoria Imp. Ser. Lancers; Hon. Major British Army; *b.* 3 Nov. 1878: 2nd *s* of the Begum, Ruler of Bhopal. *Educ.:* at home by private tutors; A.D.C. to Viceroy, 1906; Commission as Captain in H. M.'s Army, 1908; accompanied the Begum on pilgrimage to Mecca; takes keen interest in education; is Trustee of M.A.O. Coll., Aligarh; *Address:* Jahan Numa Palace, Bhopal.

O'DWYER, SIR MICHAEL FRANCIS, G.C.I.E., K.C.S.I., I.C.S., C.S.I., B.A.; Lieut-Gov., Punjab, 1913-19; *b.* 28 Apr. 1864. *Educ.:* St. Stanislaus Coll., Tullamore; Balliol Coll., Oxford. Ent. I.C.S., 1885; Agent to Gov.. Gen. in C. I., 1910-12; Knight of Grace, Order of St. John of Jerusalem, 1916.

OLDFIELD, HON. JUSTICE FRANCIS DU PRE, Puisne Judge, Madras H. C., since 1913; *b.* 30 June 1869; *Educ.:* Marlborough; Trinity Coll., Cambridge; Fellow, Madras Univ., 1916., Ent. I.C.S., 1890. *Address:* Rutland Gate, Madras.

OLDHAM, CHARLES EVELYN ARBUTHNOT WILLIAM, K.-i-H. (1st Cl.), C.S.I., I.C.S.; Comr., Patna Divn. and Mem. of Leg. Council Bihar and Orissa. *b.* 15 Sept. 1869. *Educ.:* Galway, Gram. Sch. by private tutors Balliol Coll., Oxford. Passed into the I.C.S., in 1888: Commr. of Excise, Commr of a Division and Offig. Mem. of Board of Rev.; Mem. of Bengal Leg. Council, 1907 to 1912 and of Prov. Leg. Council, Bihar and Orissa, 1912-19. *Publications:* A Manual of Arboriculture for Bengal. *Address:* Commissioner's House, Bankipur.

ORCHHA, H. H. SARAMAD-I-RAJAHA-I-BUNDEL-KHAND, MAHARAJA MAHINDRA SAWAI, SIR PRATAP SINGH BAHADUR, G.C.I.E., K.C.I.E., G.C.S.I.; *b.* 1854; *S.* brother 1874. State has area of 2080 sq. miles and population of over 300,000. *Address:* Tikamgarh, Bundelkhand.

ORMOND, HON. JUSTICE E. W.; Judge, Chief Court, Lower Burma, since 1907; *b.* 13 Feb. 1863. *Educ.:* Dover Coll., Uppingham; New Coll., Oxford. B.A. 1885; called to Bar, Inner Temple, 1887; joined Calcutta Bar, 1889; Ch. Judge, Calcutta Court of Small Causes, 1904. *Address:* Rangoon.

ORR, JAMES PETER, C.S.I.; *Educ.:* St. John's Coll. Hurstpierpoint; Caius Coll., Cambridge. Ent. I.C.S., 1886; Chairman, City of Bombay Improvement Trust. *Address:* Bombay.

PALANPUR, H. H. DIWAN SIR SHERE MAHOMED KHAN, LOHANI ZUBDAT-UL-MULK-NAWAB OF, G.C.I.E., K.C.I.E.; *b.* 1852; *S.* father 1877. Hereditary title of Nawab and personal two additional guns, 1910. State has area of 1,750 sq. miles and population of over 200,000. *Address:* Palanpur.

PALMER, RT. REV. E. J.; *see* Bombay, Bishop of.

PALMER, VEN. JOSEPH JOHN BEAUCHAMP, M.A.; Archdeacon of Kottayam, since 1907; Principal, Cambridge Nicholson Institution, Kottayam; *b.* 10 Feb. 1866. *Educ:* Wells G. S. privately; St. John's Coll., Camb. Missionary C.M.S., 1891; C.N.I., Kottayam; Surrogate, 1908. *Address:* Kottayam.

PANNA, H. H. MAHENDRA MAHARAJA YAVENDRA SINGH OF; *b.* 1893; *S. cousin* on his deposition, 1902; *m.* 1912, Kunivari Shri Manhar Kunvarba, *o. d.* of Maharajah of Bhavnagar. State has area of 2,492 sq. miles, and population of about 200,000. *Address:* Panna, Bundelkhand.

PARANJPYE, RAGHUNATH PURUSHOTTAM Prin. and Prof. of Math., Fergusson Coll., Poona, since 1902; *b.* Murdi, 16 Feb. 1876; *Educ.:* Maratha H. S., Bombay; Fergu son Coll., Poona; St. John's Coll., Cambridge (Fell.); Paris and Gottingen; First in all Univ. exam. in India; went to England as Govt. of India scholar; bracketed Senior Wrangler at Cambridge, 1899; has taken prominent part in all social, political, and educational movements in Bombay Pres. Vice-Chancellor of new Indian Women's Univ.; Bombay Leg Council, 1913-16; *Address:* Fergusson College, Poona.

PARTAB BAHADUR SING, RAJA, TALUQDAR OF KILA PARTABGARH C.I.E., Hon. Magistrate; Hon. Mem. of U. P. Leg. Council; *b.* 1866. *Address:* Kila Partabgarh, Oudh.

PARTABGARH, H. H. SIR RAGHUNATH SINGH BAHADUR, MAHARAWAT OF; K.C.I.E., *b.* 1857; *S.* 1890. State has area of 886 sq. miles and population of 62,704,; salute of 15 guns. *Address:* Partabgarh, Rajputana.

PARTAB SINGH, SIR; *see* Jodhpur, Regent of.

PATIALA, H. H. SIR BHUPINDRA SINGH, MAHARAJA OF; C.C.I.E., F.R.G.S., F.R.Z.S., M.R.A.S., M.R.S.A.; *b.* Oct. 1891; *S.* father (Sir Rajindra Singh Bahadur, G.C.S.I.), 1900. *Educ.:* Aitchison Coll., Lahore. Patiala is premier State of Punjab, is 5412 sq. miles in extent, and has population of 1,596,692. Chief receiving salute of 17 guns. *Address:* Patiala.

PATTANI, SIR PRABHASHANKAR DALPATRAM, K.C.I.E., C.I.E.; Mem. of Exec. Council of Gov. of Bombay, 1912-17; of Council of India, 1917-18; *b.* 1862. *Educ.:* Morvi; Rajkote; Bombay. *Address:* Anautwadi, Bhavnagar,

PEARS, STEUART EDMUND, C.I.E., I.C.S.; Pol. Ag. Khyber, N.-W. F. Prov., 1912-18; Vice-President, Prov. Recruiting Board and Ch. Recruiting Officer, N.W.F.P., since 19 8. *b.* 1875. *Educ.:* Edinburgh Univ.; Trinity Hall, Cambridge. Ent. I.C.S. 1898. *Address:* Peshawar.

PEASE, COLONEL HENRY THOMAS, C.I.E., V.D., A.V.S.; Hon. A.D.C to C.-in-C. India; Prin., Vet. Coll., Punjab, since 1912: Commdt. Punjab L. H. *b.* 20 July 1862. *Educ.:* St. Edmund's Coll. Old Hall Green, Ware. Insp.-Gen., Civ. Vet. Dept., Simla, 1907-12. *Address:* Veterinary College, Lahore.

PERTAB SINGH, SIR; *see* Jodhpur, Regent of.

PENTLAND, of Lyth, Caithness. 1st Baron, JOHN SINCLAIR, G.C.I.E.; Governor of Madras, 1912-19; *b.* 1860; *e. s.* of late Captain George Sinclair, and *g. s.* of late Sir John Sinclair, Bt., Dunbeath; *m.* 1904, Lady Marjorie Gordon, *o. d.* of 7th Earl of Aberdeen; one *s.* one *d. Educ.:* Edinburgh Acad.; Wellington; Sandhurst. Ent. Army, 1879; served in Soudan Expedition, 1885 (medal and clasp); retired as Captain, 1887; A.D.C. to Lord-Lieut. of Ireland (Aberdeen), 1886; contested (G.L.) Ayr Burghs, 1886; L.C.C. 1889-92; M.P. for Dumbartonshire, 1892-95, Sec. to Gov. Gen. of Canada (Aberdeen), 1895-97; M.P. (L.) Forfarshire, 1897-1909; Sec. for Scotland, 1905-12. *Heir:* *s.* Hon. Henry John Sinclair, *b.* 6 June 1907. *Address:* Govt. House, Madras. *Clubs:* Brook's, Army and Navy.

PERINI, RT. REV. PAUL, S.J., D.D.; Bishop of Mangalore, since 1910; *b.* Brandola, Italy, Jan. 1867. *Educ.:* various College of Society of Jesus in Austria, England, and Belgium. Joined Society of Jesus, 1883; Rector and Prin. of St. Aloysius Coll., Mangalore, for six years; Fell. Univ. of Madras. *Address:* Bi hop's House, Mangalore.

PETIT, SIR DINSHAW MANOCKJEE, 2nd Baronet; *s.* of late Framjee Dinshaw Petit, 2nd son of 1st Baronet; *b.* 7th June, 1873; *s.* his grandfather, Sir Dinshaw Manockjee, under special remainder, 1901, and changed his name from Jeejeebhoy Framji Petit to Dinshaw Manockjee Petit; Merchant and Cotton Mill Owner; J.P. for Bombay; a Delegate of Parsee Ch. Matrimonial Court of Bombay; Pres. of Association for Amelioration of Poor Zoroastrians in Persia, the Petit Charity Funds, Petit Institute, and Parsee Orphanage, and Chairman and Member of Managing Committees of the principal Parsee charitable institutions in Bombay; *m.* 1894, Dinbai, *d.* of Sir Jamsetjee Jejeebhoy, 3rd Bart., and has issue. *Address:* Petit Hall, Malabar Hill, Bombay.

PETRIE, DAVID, C.I.E.; *b.* 1879. *Educ.:* Aberdeen Univ.; Ent. Ind. Police 1900; Asst. Dir., C.I.D., Simla, 1911-12; Spec. duty with Home Dept., since 1915. *Address:* c-o King, King & Co., Bombay.

PHAYRE, LT.-GEN. SIR ARTHUR, K.C.B., C.B.; Div. Commdr. (Secunderabad), India, since 1914; *b.* 23 Feb. 1856; *s.* of Gen. Sir Robert Phayre, G.C.B.; *Educ.:* Cheltenham Coll.; Jesus Coll., Cambridge. Ent. Army, 1878; Ind. Army 1881; Col., 1904; A.D.C. to Gov. of Bombay, 1885-90; A.A.G. India, 1904; served Afghan War, 1878-80; China, 1900; S Africa, 1902; commanded Meerut Cav. Brig., 1904-07; Sialkot Brig., 1908-11. *Address:* Ootacamund.

PIGGOTT, HON. MR. JUSTICE THEODORE CARO, B.A., I.C.S.; Puisne Judge, Allahabad, since 1914; *b.* Padua, 26 Oct. 1867. *Educ.:* Kingswood Sch. Bath; Christ Church, Oxford. Ent. I.C.S., Jud. Commsr. of Oudh, 1911; *Address:* High Court, Allahabad.

PIGOTT, LT.-COL. ROBERT EDWARD PEMBERTON, C.I.E., V.D., M.I.E.E.; Ch. Elec. Eng., B. B. & C. I. Ry. since 1908; Lt.-Col. Commdg. B. B. & C. I. Ry. Bn., I.D.F., *b.* 6 Oct. 1866; *Educ.:* Trent Coll., Nottingham. Hon. A.D.C. to C.-in-C. in India; *Address:* Bombay.

PILKINGTON, HARRY SEYMOUR HOYLE, C.I.E., M.V.O.; Postmaster-General, Nagpur; *b.* 1869. Ent. Ind. P.O., 1890; Asst. Dir.-Gen., 1909-16; served with F. P. O. in China Exp., 1900-02; took charge of postal arrangements during visits to India of Prince and Princess of Wales, 1905-06; Ameer of Afghanistan, 1906-07; and King George and Queen Mary, 1911-1912; Dir., Postal Services with Indian Forces in France, 1914. *Address:* Nagpur.

PLOWDEN, Cecil Ward Chicheley, C.I.E.; Insp.-Gen. of Police, Bengal; *b.* 18 Oct. 1864; Joined Bengal Police, 1884. *Address*; Calcutta.

PO SA, Maung, I.S.O.; *b.* Toungoo, 13 May 1862. *Educ.*: St. Paul's R.C.M. Sch., Toungoo. Senior Member, Burma Prov. Jud. Ser. since 1911; Interpreter to Prince of Wales, during visit to Burma, Jan. 1906. *Address*: Rangoon.

POWELL, A., B.A., M.B., M.Ch.; Prof. of Med. Jurisprudence and Biology; Hon. Capt. in Army. Served with Lumsden's Horse in S. Africa.

PRATT, Edward Millard; Judge, High Court, Bombay, 1918; *b.* 29 August 1865; *Educ.*: Dulwich Coll. and Univ. Coll., London. Appointed I. C. S., 1886; Dist. and Sess. Judge, 1897; Leg. Rem., 1905; Jud. Commsr. of Sind, 1910; *Address*: High Court, Bombay.

PRATT, Frederick, I.C.S.; Commissioner, Northern Division, Bombay Presidency. *b.* 4 Dec. 1869. *Educ.*: Dulwich Coll.; Hertford Coll., Oxford. *Address*: Shahabagh, Ahmedabad.

PRASAD, Ganesh, B.A., (Cantab.), M.A., D.Sc.; Sir Rashbehary Ghose, Prof. of App. Math. at Calcutta University; *b.* 15 Nov. 1876. *Educ.*: Ballia; Allahabad; Cambridge. Gottingen. Member of Court, Hindu Univ., 1916. *Address*: 92, Upper Circular Road, Calcutta.

PRATAB SINGH, Sir; *see* Jodhpur, Regent of.

PRICE, Venerable Cyril, M.A.; Archdeacon of Nagpur, since 1910. *Educ.*: King Edwards' Sch., Birmingham; Worcseter Coll., Oxford. Priest, 1891; Senior Chaplain, 1910. *Address*: Jubbulpore.

PUDUKOTA, H. H. Raja Martand Bhairava Tondiman Bahadur, Raja of, G.C.I.E., *b.* 1875; *S.* grandfather, 1886. State has area of 1380 sq. miles, and population of 380,582, and has been ruled by Tondiman dynasty from time immemorial. Salute, 11 guns. *Address*: Pudukota.

PUDUMJEE, Nowrojee, 1st Class Sardar of Deccan, Bombay; C.I.E.; *b.* 1841; *Educ.*; Poona Coll. under Sir Edwin Arnold, war mem. of Bombay Leg. Council; Promotes and Chairman of several Industrial and Banking Companies. *Address*: Pudumjee House, Poona.

PURSHOTAMDAS Thakurdas, O.B.E.; Addl. Mem. Leg. Council (1916); Cotton Merchant; *b.* 30 May 1879; *Educ.*: Elphinstone Coll. Bombay. Trustee of Port of Bombay; Chairman, Ind. Merchants' Chamber and Bureau; Chairman, Bombay Cotton Exch. Chairman, Bombay Stock Exch. *Address*: Malabar Castle, The Ridge, Bombay.

PURVES, Robert Egerton, C.I.E.; P. W. D. retired; *b.* 1859; *Educ.*: Thomason Coll., Roorkee; Ex. Eng., 1895; Supdt., Eng. 1907; Ch. Eng. and Sec. to Govt. Punjab, Irrigation Branch, 1913-14: retired, 1914; since practising as Hydraulic Eng. and Irrigation Expert. *Address*; Lahore.

QUILON, Bishop of; *see* Benziger, Rt. Rev A.M.

RADHANPUR, H. H. Mahomed Jalaludhin-khan Babi, Bahadur, Nawab of; *b.* 1 April 1889; Pathan, Babi, Mahomedan. *Educ.*: Rajkumar Coll., Rajkot. *S.* brother 1910; State has area of 1150 sq. miles, and population of 65,567; Salute 11 guns. *Address*: Radhanpur.

RAGHAVA RAU, G. Pantulu; Mem. of Madras Leg. Council and Vakil of Madras High Court; *b.* 1862. *Educ*: Presidency Coll., Madras. *Address*: Anandabag, Vepery, Madras.

RAGHUNATHDAS RAI BAHADUR, Diwan Bahadur Chaube, C.S.I.; *b.* Nov. 1849; *Educ.*: Humes H. S., Etawah; Govt. Coll., Agra. Entered Native State Service in Rajputana; was Mem. of State Council, Kotah; Diwan, Kotah State, since 1896. *Address*: Kotah.

RAGHUNATH RAO DINKAR, Rao Raja Mashir-i-Khas Bahadur, Madar-ul-Mo-ham, C.I.E.; Pol. Sec. to Mahaaja Scindia; is a member of His Highness' Majlis-i-Khas, ranks as first class Sardar in Bombay: *b.* 4 Aug. 1858; *Educ.*: privately; Priv. Sec. to late Maharaja, and was Add. Acct.-Genl. *Address*: Gwalior.

RAHIMTOOLA, Sir Ibrahim, Kt., C.I.E.; Mem. Exec. Council, Bombay; was Mem. of Imp. Council; Mem., Bombay Leg. Council; *b.* May 1862. *Address*: Pedder Road, Cumballa Hill, Bombay.

RAHIMTULLA Currimbhoy Ebrahim, B.A., (1908). Merchant and Mill-owner; *b.* 27 May 1887; *Educ.*: Elphinstone Coll., Bombay. Pres. of Bombay Mun. Corpn. (1918-19). *Address*: 137, Esplanade Road; "Belvedere" Warden Road, Bombay.

RAJAGOPALA Chariyer, Perungavur, M.A., B.L., C.I.E.; Sec. to Govt., Madras, since 1914. *Educ.*: Madras Univ. Ent. I.C.S., 1888; Diwan to Raja of Cochin, 1896-1902; Diwan of Travancore, 1907-14. *Address*: Madras.

RAJARATHNA Mudaliyar, Pakam, C.I.E.; Diwan Bahadur; served in Salt Dept. since 1860; Insp.-Gen., Registration, 1896; Mem. of Madras Council, 1896-1902. *Address*: Madras.

RAJKOT, Thakur Saheb Lakhaji Bowaji; *b.* 17 Dec. 1885. *Educ.*: Rajkumar Coll., Rajkot. State has area of 282 sq. miles, and population of 49,938; salute of 9 guns. *Address*: Rajkot.

RAMPAL, Raja; *see* Kutlehr.

RAMPUR, Col. H. H. Alijah, Farzand-i-Dilpizir-i-Daulat-i-Inglishia, Mukhlis-ud-Daulah, Nasir-ul-Mulk, Amir-ul-Umara, Nawab Sir Sayed Mohammad Hamid Ali Khan Bahadur, Mustaid Jung; G.C.I.E., G.C.V.O.; A.D.C., to King-Emperor; *b.* 31 Aug. 1875; *S.* 1889. Well educated in Arabic, Persian, and English; State has area of 892 sq.miles and population of 531, 712; salute of 13 guns. *Address*: Rampur State.

RANGOON, BISHOP OF, since 1910; RT. REV. ROLLESTONE STERRITT FYFFE, D.D.; *Educ.:* Clifton Coll.; Emanuel Coll., Cam.; Ordained, 1894; S.P.G. Missionary, Mandalay, 1904-10: *Address:* Bishop's Court, Rangoon.

RANJITSINHJI; *see* Nawanagar.

RATTIGAN, HON. JUSTICE SIR H. A. B.; Ch. Judge, Ch. Court, Punjab; *b.* 11 Oct. 1864; *s.* of late Sir William Rattigan, K.C., M.P. *Educ.:* Harrow; Balliol Coll., Oxford. Called to Bar, Lincoln's Inn, 1888; Legal Rem., Punjab Govt., 1900; Judge, Punjab Ch. Court, 1909. *Address:* Lawrence Road, Lahore.

RAWLINSON, HUGH GEORGE; Principal, Karnatak Coll., Dharwar; *b.* 12 May 1880; *Educ.:* Market, Bosworth Gram. Sch. and Emmanuel Coll., Cambridge; Lecturer in English and Classics, Royal Coll., Colombo, 1902-07; Ent. I.E.S. as Professor of English Literature, Deccan Coll., Poona, 1908 and 1915; Act. Prin., Gujarat Coll., Ahmedabad, 1914; Apptd. to Karnatak Coll., Dharwar, 1917. *Publications:* Bactria; The History of a Forgotten Empire; Indian Historical Studies; Shivaji the Maratha; Intercourse between India and the West. *Address:* Dharwar.

RAY, MAHENDRANATH, C.I.E., M.A., B.L.; Vakil, Calcutta High Court; *ex*-Mem., Bengal Council; *b.* Oct. 1862. *Educ.:* Presidency Coll., Calcutta. Mem. of Syndicate, Calcutta Univ., since 1910. *Address:* 8, Khooroo Road, Howrah, and 2, Boloram Bose's 1st Lane, Bhawanipur, Calcutta.

RAY, PROFULLA CHANDRA, C.I.E., D.Sc. (Edin.); Ph. D. (Cal.); Sen. Prof. of Chemistry, Univ. Coll. of Sc., Calcutta; *b.* Bengal, 1861. *Educ.:* Calcutta; Edinburgh Univ. Graduated at Edinburgh. D.Sc.; Hon. Ph.D., Calcutta Univ., 1908; Hon. D.Sc., Durham Univ., 1912. Dean of Fac. of Sc. Univ. of Calcutta 1915. *Address:* College of Science, Calcutta.

READYMONEY, SIR JEHANGHIER COWASJEE JEHANGHIER; *see* Jehanghier.

REED, SIR STANLEY, KT., K.B.E., LL.D. (Glasgow); Editor, *The Times of India*, Bombay, since 1907; *b.* Bristol, 1872; *m.* 1901, Lillian, *d.* of John Humphrey of Bombay. Joined staff, *Times of India*, 1897; Sp. Correspdt., *Times of India* and *Daily Chronicle* through famine districts of India, 1900; tour of Prince and Princess of Wales in India, 1905-06; Amir's visit to India, 1907, and Persian Gulf, 1907; Jt. Hon. Sec., Bombay Pres., King Edward and Lord Hardinge Memorials; Lt.-Col. Commdg. Bombay L. H. and Hon. A.D.C. to Viceroy; represented Western India at Imp. Press Confce., 1909. *Address:* The Times of India, Bombay.

REID, WILLIAM JAMES, C.S.I.; Commsr., Surma Valley, Assam, and Mem., Imp. Leg. Council, since 1914; *b.* 1871. *Educ.:* Glasgow H. S.; Emmanuel Coll., Cambridge; Ent. I.C.S., 1891. *Address:* Silchar, Assam.

REWAH, HIS HIGHNESS MAHARAJA VENKAT RAMAN SINGH BAHADUR, G.C.S.I.; Hon. Lt.-Col. in Army, 1915; *b.* 23 July 1876; *Educ.:* Rewah. Invested in November 1895; Considerable services during European war. *Heir:* Maharaj Kumar Prince Gulab-singhji. *b.* 12 March 1903. *Address:* Rewah.

RICE, WALTER FRANCIS, C.S.I., Ch. Sec., Burma, since 1907; Mem. of Lt.-Gov's. Council, since 1909; Add. Mem. of Imp. Council; *Educ.:* Morrison's Acad. Crieff; Balliol Coll. Oxford. Ent. I.C.S., 1890; Sec. to Govt., 1905. *Address:* Secretariat., Rangoon.

RICHARDS, HON. CHIEF JUSTICE, SIR HENRY GEORGE, KT., K.C., M.A.; Chief Justice, Allahabad, since 1911. *Educ.:* Trinity Col.' Dublin. Call to Irish Bar, 1883; Vice-Chan. of Univ. of Allahabad. *Address:* Allahabad.

RIVINGTON, REV. CEIL STANSFELD; Mission Priest in Diocese of Bombay; Supdt. of S.P.G. Missions in Canarese-speaking district of Bombay Diocese; Hon. Canon of St. Thomas Cathedral, Bombay; *b.* London, 1853. *Educ.:* Rugby; Priest, 1879. *Address:* Betgeri-Gadag, Dharwar District, Bombay.

ROBERTS, LT.-COL. SIR JAMES REID, KT., C.I.E., M.B., M.S., F.R.C.S. (Eng.) I.M.S., *b.* 24 Jan. 1861. *Educ.:* Dollar; Lausanne; Middlesex Hosp., London; Durham Coll. of Med. Ent. I.M.S., 1888. Surgeon to Lord Hardinge: Civil Surgeon, Simla W. *Address:* Simla.

ROBERTSON, SIR BENJAMIN, K.C.S.I., K.C.M.G., C.S.I., C.I.E., Hon. LL.D. (Aberdeen); Ch. Commsr., C. P., since 1912; *b.* 16 Oct. 1864. *Educ.:* Private Sch.; Aberdeen Univ.; Balliol Coll., Oxford. Passed into I. C. S. 1883; Ch. Sec. to Ch. Commsr. C.P., 1902-06; Sec. Govt. of India, Commerce Dept., 1907; Temp. Mem. of Imp. Council, 1910; Spl. duty in S. Africa, 1914, with Commission of Inquiry into Grievances of Indians within Union. *Address:* Nagpur.

ROBERTSON, LAURENCE; C.S.I.; Pol. Sec., Bombay, 1913-18; *Educ.:* Glasgow Acad. and University; Ball. Coll., Oxford. Ent. I.C.S., 1892; Priv. Sec. to Gov. of Bombay, 1907-08; Sec. to Govt. of Bombay, 1908-11; Adm., Junagadh State, 1911-1913. *Address:* Bombay.

ROBINSON, SYDNEY MADDOCK; Puisne Judge, Ch. Court of Lower Burma, since 1908; *b.* 3 Dec. 1865. *Educ.:* Hereford Cath. Sch.; Brasenose Coll., Oxford. Called to Bar, Middle Temple, 1888; Govt. Adv. and Leg. Rem. to Punjab Govt. *Address:* 1, Leeds Road, Rangoon.

ROE, FRANCIS REGINALD, Judge, Patna High Court, *b.* 5 Aug. 1869; *Educ.:* Winchester; New Coll., Oxford. Ent. I.C.S., 1893. Offig. Judge, Calcutta H. C., 1915 and 1915. *Address:* Bankipore.

ROGERS, LIEUT.-COL. SIR LEONARD, KT., C.I.E., F.R.S., M.D., B.S. (London), F.R.C.P., F.R.C.S., I. M. S.; Prof. of Pathology, Med. Coll. Calcutta; Pres. Asiatic Soc. of Bengal; Hon. Mem. of Cam. Phil. Soc. *b.* 1868. *Educ.*

Plymouth Coll.; St. Mary's Hos., London; Ent. I. M. S., 1893; Milroy Lecturer, R. C. P., 1907. Pres., Ind. Science Congress, Bombay, 1919. *Publications:* Numerous Scientific. Papers in medical journals and Royal Soc. publications. *Address:* Calcutta.

RONALDSHAY, EARL OF; LAWRENCE JOHN LUMLEY DUNDAS, G.C.I.E., Gov. of Bengal, since 1916; *e. sure. s.* of 1st Marquess of Zetland; *b.* 11 June 1876; *m.* 1907. Cicely, 2nd *d.* of Col. Mervyn Archdale, late 12th Lancers; one *s.* three *d. Educ.:* Harrow; Trin. Coll., Camb.; Travelled Ceylon, 1898; India, 1899-1900; Persia, 1900-01; Asiatic Turkey, Persia, Central Asia, Siberia, 1903; Japan, China, Burma, 1906-07; A.D.C. Viceroy's Staff, India, 1900; M.P. (U.) Hornsey Division, Middlesex, 1907-16. *Address:* Govt. House, Calcutta.

ROOS-KEPPELL, LT.-COL. SIR GEORGE, G.C.I.E., K.C.S.I., K.C.I.E., C.I.E., J.P., F.R.G.S.; Member of the Council of India, 1919; Ch. Commsr. and Agent to Gov., Gen., N.-W. F. Prov., 1908-19; Hon. Col-Khyber Rifles, 1909; *b.* 7 Sep. 1866; joined Roy. Scots Fus. 1886; Cap., 1895; Brev. Maj. 1899; Bt. Lt.-Col., 1907; transferred to Indian Staff Corps, 1897; served Burmese Exp., 1885-89; Tirah Exp., 1897-98; commanded, operations against Para Chamkannis, 1899; Bazar Valley F. F. 1908, as Ch. Pol. Officer, and in command of column; holds Swedish Military Order of Sword, employed in France 1914, as extra King's Messenger; Pres. Ind. Branch League of Mercy; Knight of Grace, Order of St. John of Jerusalem, 1916; President, Provincial Centre, St. John Ambulance Association. *Address:* India Office, London.

ROUSE, ALEXANDER MACDONALD, C.I.E., Supdt. Works, Delhi; *b.* 14 Sep. 1878; *Educ:* St. Paul's Sch.; R.I.E.C. Cooper's Hill. *Address:* Delhi.

ROY, RT. REV. AUGUSTIN; Bishop of Coimbatore, since 1904; *b.* France, 1863. *Address:* Catholic Cathedral, Coimbatore.

RUNCHORELAL, SIR GIRIJAPRASAD CHINUBHAI MADHAVLAL, 2nd Bt.; *b.* 19 Apr. 1906-*s.* of 1st Bt. and Sulochna, *d.* of Chunilal Khushalrai; *S.* father 1916. [Father was first member of Hindu community to receive baronetcy.]. *Heir:* none. *Address:* Shahpur House, Ahmedabad.

RUSSELL, CHARLES LENNOX SOMERVILLE; *b.* 10 July 1872. *Educ.:* Rugby; St. John's Coll., Camb.; Ent. I. C. S. 1893; travelled through Baluchistan, Persia, and Central Asia, overland to Europe; Sp. duty in For. Dept. of Govt. of India, 1908-1909; Resident at Indore, 1909-1912, and again 1913-15; Resident, Baroda.

RUTLAM, LT.-COL. H. H. SIR SAJJAN SINGHJI; K.C.S.I. Raja Sahib Bahadur of Rutlam, *b.* 13 Jan. 1880; *S.* father (Sir Ranjit Singhji K.C.I.E.), 1893; *m.* 1902, *d.* of H. H. Rao of Kutch. State has area of 1130 sq. miles and population of 82,497; salute of 11 guns; descended from younger branch of Jodhpur family, and maintains moral supremacy over Rajput chiefs in Malwa; served European War (France) 1915 and 1916. *Address;* Rutlam.

SABNIS, RAO BAHADUR R. V., B.A., C.I.E.; Diwan, Kolhapur State, since 1898; *b.* 1 April 1857; *Educ.:* Rajaram H. S., Kolhapur; Elphinstone Coll., Bombay. Ent. Educ. Dept; held offices of Huzur Chitnis and Ch. Rev. Officer, Kolhapur; Mem. of Royal Soc. of Arts, East India Assoc.; Roy. Asiatic Soc., Bombay Br. *Address:* Kolhapur.

SACHIN, NAWAB SEEDEE IBRAHIM MOHOMMED YAKUT KHAN-MUBARZARUT DAWLA NASRAT JUNG BAHADUR, NAWAB OF; A.D.C.; *b.* 1886, and succeeded as an infant in following year. Installed May 1907; Hon. C. Captain, 1909. State has area of 49 sq. miles, and population of 60,000; salute of 9 guns. *Educ.:* Rajkumar Coll., Rajkote; Mayo Coll., Ajmere; Imp. Cadet Corps. Served G.E.A. in 1914-15. *Address:* Sachin, Surat.

SAILANA, H. H. SIR JESWANT SINGHJI BAHADUR, K.C.I.E., RAJA OF; *b.* 1864; *s.* of Maharaj Bhawani Singhji, late Jagirdar of Semlia; adopted by H. H. Raja Duleh Singhji. *S.* 1895; *Educ.:* Daly Coll., Indore. State has area of 450 sq. miles, and population of 30,000; salute of 11 guns; Gave contribution of Rs. 50,000 to British war expenses and various charitable funds pertaining to war. *Address:* Sailana, Malwa.

ST. JOHN, MAJOR HENRY BEAUCHAMP, C.I.E.; Pol. Ag. and Dy. Commsr., Quetta, Peshin. *b.* 26 Aug. 1874. *Educ.:* Sandhurst. Ent. Army, 1893. *Address:* Quetta.

SAMTHAR, H. H. MAHARAJA SIR BIR SINGH DEO, MAHARAJA OF, K.C.I.E.; *b.* 8 Nov. 1865; *S.* 1896. *Address:* Samthar Bundelkhand.

SANDBROOK, JOHN ARTHUR; Editor of The Englishman, Calcutta, since 1910; *b.* 3 May 1876. *Educ.:* Swansea G. S. Ent. Journalism, 1892; Ch. Asst. Editor, Western Mail, Cardiff, 1902-10; served in S. African War. *Address:* 9, Hare Street, Calcutta.

SANDERSON, SIR LANCELOT, KT., K.C.; Ch. Justice of Bengal, since 1915; *b.* 24 Oct. 1863. *Educ.:* Elstree; Harrow; Trin. Coll., Camb. Called to Bar. Inner Temple, 1886; M.P. (U.) Appleby Div. Westmorland, 1910-15; Recorder of Wigan, 1901-15. *Address:* 7, Middleton Street, Calcutta.

SANKARAN NAIR, SIR CHETTUR, KT., C.I.E., B.A., B.L.; Mem. of Viceroy's Exec. Council in India; *b.* 11 July 1857. *Educ.:* Madras Pres Coll.; H. C. Vakil; Ad.-Gen., Madras; for some time Act. then Perm. Judge High Court, Madras; for many years Mem. of Madras Council; Pres. of Ind. Nat. Congress at Amroati; Pres. of Ind. Soc. Confec. Madras; Pres. of Ind. Industrial Exh. Madras; founder and for some time editor Madras Review and Madras Law Journal. *Address:* Delhi.

SAO, SIR MOUNG, K.C.I.E., C.I.E., Sawbwa of Yawng Hwe, Burma; Mem. of Imp. Leg. Council. *Address:* Yawng Hwe, Shan States Burma.

SARDAR GHOUS BAKSH KHAN RAISANI, Sir, K.C.I.E., premier Chief of Sarawans, Baluchistan.

SARVADHIKARY, Deva Prasad, C.I.E.; M.A., B.L., LL.D., (Aberdeen), LL.D. (St. Andrews), Surivatna (Navadwip) Vedyaratnakar; Vice-Chan., Calcutta Univ.; Mem. of Bengal Council; *Educ.:* Rameswarpore; Sanskrit Coll., Presidency Coll., Calcutta. For several years Mem. of Mun. Corpn. of Calcutta; Mem. of Imp. Lib. Comm; Trustee, Imp. Museum; Pres., various literary societies; Mem. B. I. Assoc.; Vice-Pres. Calcutta Univ. Inst. *Address:* 20 Suri Lane, Calcutta.

SCOTT, Sir Basil, Kt., M.A.; Ch. Justice of Bombay, since 1908; *b.* 1859; *Educ.:* Haileybury; Ball. Coll., Oxford. Called to Bar, 1883; admitted Adv. of H. C., Bombay, 1885; Actg. Adv.-Gen., Bombay, 1899; Adv.-Gen., Bombay, 1900-08. *Address:* Bombay.

SETHNA, Phiroze Cursetjee, B.A., J.P., O.B.E. (1918); Member, Bombay Legislative Council. *b.* 8 Oct. 1866. *Address:* Canada Building, Hornby Road, Bombay.

SEAL, Brajendranath, M.D., Ph.D.; George V. Prof. of Mental and Moral Science, Calcutta Univ. since 1914; *b.* 3 Sep. 1864. *Educ.:* Gen. Asst. Coll.; (Ch. of Scotland): Calcutta Univ.; Del., Orientalist Congress, Rome, 1899; opened discussion at 1st Univ. Races Congress, London, 1911; Mem. Simla Committee for drawing up Calcutta Univ. Reg, 1905. *Address:* 25 Rammohon Shaw Lane, Duff Street, Calcutta.

SEGRADA, Rt. Rev. Emanuele; Vicar-Apostolic of Eastern Burma and titular Bishop of Hirina, since 1908; *b.* Lodi. 1860. *Address:* Karen Hills, Toungoo, Burma.

SELL, Rev. Canon E., B.D., (Lambeth), D.D., (Edin.); Fellow, Madras Univ.; Sec. Ch. M. Soc. Madras, since 1881; *b.* 1839; *Educ.:* C.M.S. Coll., London. Arr. in India, 1865; Numerous publications on the history of Islam. *Address:* Vepery, Madras.

SETALVAD, Rao Bahadur Chunilal Hari Lal, C.I.E., Second Presidency Magistrate, Bombay. *Address:* Bombay.

SEN, Jitendranath, M.A.; Calcutta Univ. Sen. Prof. of Phy. Sc., City Coll., since 1903. and of Chem., Nat. Med. Coll. Calcutta; *b.* 1875. *Educ.:* Hindu Sch.; Presidency Coll.; City Col. and Sc. Assoc. Calcutta. Took up teaching as profession *Address:* 25, Muddun Mohun Sen's Street. Calcutta.

SHAH, Hon. Lallubhai Asharam, M.A.; LL.B.; Judge of High Court Bombay, since 1913; *b.* 1873; *Educ:* Gujerat Coll., Ahmedabad; Govt. Law Sch., Bombay. *Address:* Malabar Hill, Bombay.

SHAHPURA, Raja Sir Nahar Singh Dhiraj, K.C.I.E.; *b.* 7 Nov. 1855; *S.* Shahpura Gaddi by right of inheritance, 1870. *Address:* Shahpura, Rajputana.

SHAKESPEAR, Alexander Blake, C.I.E.; Merchant; partner in firm of Begg, Sutherland & Co.; *b.* 1873. *Educ.:* Berkhampstead. Was Sec., Upper India Chamber of Commerce, 1905-12. *Address:* Cawnpore.

SHAMSHER SINGH, Sir Sardar, Sardar Bahadur, K.C.I.E., C.I.E.; Ch. Min., Jind State; *b.* 1860. *Educ.:* Jullundur and Hoshiarpur H. S. and Govt. Coll., Lahore. Served during Afghan War, 1879-80, with march from Kabul to Kandahar; Ch. Jud. of State, High Court, 1899-1903. *Address:* Sangrur, Jind State.

SHAMS-UL-HUDA, The Hon. Mr. Justice (Nawab Sir Syed) K.C.I.E., M.A., B.L.; Judge, Calcutta High Court, since 1917; *b.* 1864; belongs to well-known family of Syeds in Tippera, East Bengal; *Educ.:* Presidency Coll,. Calcutta; Calcutta Univ. Commenced practice as Vakil in High Court at Calcutta; Mem., Bengal Exec. Council, 1912-17; Vice-Pres. Bengal Exec. Council, April-June 1917; held office of Sec. of Bengal Prov. Moslem League and that of Bengal Landholders Assoc. Pres., All-India Moslem League, 1912. *Address:* 220-2, Lower Circular Road, Calcutta.

SHARFUDDIN, Hon. Mr. Justice Syed; *ex.* Judge of Patna High Court; Mem. of Exec. Council, Lt.-Gov. of Behar, since 1917; *b.* Neora, 10 Sept. 1856; *Educ.:* Patna Coll. Called to Bar. 1880; Puisne Judge, Calcutta, 1907-15; Mem. of Senate of Calcutta Univ., 1904; Bengal Council, 1905; Pres. of All India Md. Educ. Confce., 1906. *Address:* High Court, Patna.

SHARP, Henry, C.S.I., C.I.E., M.A.; Educ. Commsr. with Govt. of India in Educ. Dept., since 1915; Mem. Imp. Council; *b.* 1 June 1869; *Educ.:* Rugby; New Coll., Oxford. I. E. S. 1894, in C. P. Dir. of Pub. Inst., E. B. and Assam, 1906-10; *Address:* Simla and Delhi.

SHASTRI, Prabhu Dutt, Ph.D. (Kiel), B. Sc. Litt. Hum. (Oxon.), M.A. B.T., Hon. M.O.L. (Punjab); I.E.S.; Sen. Prof. of Mental and Moral Phil. in Presidency Coll. Calcutta, since 1912; *b.* 20 June 1885; *Educ.:* Universities of Lahore, Oxford, Kiel, Bonn, and Paris. Del. to and Sectional Pres. at 4th Int. Congress of Philosophy held at Bologna, 1911; Head of Dept. of Philosophy, since 1912, Calcutta Univ. Lect. in Phil. and Sanskrit, 1912-15; invited to lecture in Universities of Geneva, Florence and Rome, 1913-14. *Publications:* several works and articles on philosophical, educational, literary, religious and social subjects. *Address:* Presidency College, Calcutta; Bellevue, Lahore.

SIDGWICK, Charles Kater Dury, D.S.O.; Dist. Loco. and Carr. and Wagon Supdt. B. B. & C. I. Ry.; *b.* 12 July 1873; *Educ.:* Rottingdean; Winchester. Served apprenticeship, L. and N. W. R. Co. at Crewe, 1892-95; served Boer War (D.S.O.); *Address:* B. B. & C. I. Railway, Bombay.

SIKKIM, Maharaja of, H. H. Maharaja Trashi Namgyal; *b.* 26 Oct. 1893; *s.* of late Maharaja Sir Thotub Ramgyal, K.C.I.E., of Sikkim. *Educ.:* Mayo Coll., Ajmer; St. Paul's Sch., Darjeeling. *Address:* The Palace, Gangtok, Sikkim.

SIMLA, ARCHBISHOP OF, since 1911, MOST REV. ANSELM, E. J. KENEALY; *b.* 1864. Ent. Franciscan Order, 1879; Priest, 1887; Guardian of Franciscans, Crawley, Sussex, 1899; Minister, Provincial for England, 1902; first Rector of the Franciscan College, Cowley, Oxford, 1906; elected life member of Oxford Union, 1907; Definitor-General representing English-speaking provinces: Visitator-General, Irish Province, 1910. *Address:* Archbishop's House, Simla.

SIMONSEN, JOHN LIONEL, F.I.C.; D.Sc. (Manch.); Prof. of Chem. Presidency Coll., Madras; Dy. Controller, Ind. Mun. Board; *b.* 22 Jan. 1884; *Educ.:* Manchester G. S. and Univ.; Pres., Chem. Section Ind. Sc. Congress; 1917. *Address:* Simla and Delhi.,

SIMPSON, SIR CLEMENT BELL, KT.; Manager of Binny & Co., Madras; *b.* Madras, 25 July 1866; *Educ.:* Locker's Park; Rugby. Went to Binny & Co., Madras, 1886; partner, 1890; Mem., Madras Chamber of Commerce; sometime Trustee of Madras Port Trust; Director, Bank of Madras, and Director of local Cotton Manufacturing Companies. *Address:* c-o Binny & Co., Madras.

SIMPSON, GEORGE CLARKE, F.R.S., D.Sc.; Controller, Indian Munitions Board; *b.* Derby; 1878. *Educ.:* Diocesan Sch., Derby; Owens Coll., Manchester; Gottingen. Scientific Asst., Meteorological Office, London, 1905; joined staff of Indian Meteorological Department, 1906; Physicist, British Antarctic Exp., 1910-12. *Address:* Munitions Board, Simla and Delhi.

SINGH, KUNWAR MAHARAJ, C.I.E.; *b.* 17 May 1878. *Educ.:* Harrow; Ball. Coll. Oxford; Bar-at-law, Middle Temple, 1902; Ent. Prov. C. S. U. P. as Dy. Coll. 1904; Sen. Asst. Sec. to Govt. of India, Dept. of Education, 1915, Mag. and Coll. of Hamirpur, U.P., 1917.

SINGH, SIR RAMESHAR, G.C.I.E.; Maharaja Bahadur of Darbhanga; Mem. Exec. Council, Bihar and Orissa, since 1912; Mem. of Imp. Council, 1899-1900; *b.* 16 Jan. 1860; *S.* Maharaja Bahadur Sir Lakshmeshwar Singh, G.C.I.E.; *Educ.:* Queen's Coll. Benares; privately; Life-Pres., Behar Landholders Assoc. Maithel Mahasabha, Bharat Dharma Mahammandal, and also Pres. Hindu Univ. Soc., Behar Panchayat Assoc. etc.; *Address:* Darbhanga, and Ranchi.

SINGH, LT.-COL. MAHARAJ, SIR SRI BHAIRUM BAHADUR, K.C.S.I., C.S.I., A.D.C.; Vice-Pres. and Pol. Mem. of State Council; *b.* 1879; *s.* of Maharaj Sri Khet Singh, and *c.* of Maharajah of Bikaner. *Educ.:* Mayo Coll., Ajmer. *Address:* Bikaner.

SINGH, PRINCE VICTOR D. *see* Duleep Singh.

SINHA, NARENDRA PRASANNA; Major, I.M.S., retired; Consulting Physician; Mem., Advisory Council, India Office; *b.* 20 Sept. 1858. *Educ.:* Calcutta; Univ. Coll., London. Ent. I.M.S., 1886; retired 1905.

SINHA, LORD SATYENDRA PRASSANA, 1ST BARON, P.C., K.C.; Under Sec. of State for India, 1919; raised to Peerage (1st Indian); *b.* 1864; *Educ.:* Birbhoom Zilla Sch.; Presidency Coll. Calcutta; Lincoln's Inn; called to Bar, 1886; Barrister, Calcutta H. C.; Standing Counsel, Govt. of India, 1903; Adv. Gen., Bengal, 1907-1917; Representative of India in Imp. War Confce., 1917 and in 1918; Freeman of City of London, 1917: App. Representative of India at Peace Conference. *Address:* India Office, London.

SIRMUR, HIS HIGHNESS RAJA AMAR PARKASH BAHADUR, Chief of; K.C.S.I., *Address:* Sirmur, Nahan.

SIROHI, H. H. MAHARAJA DHIRAJ, MAHARAO SIR KESRI SINGH BAHADUR, K.C.S.I., G.C.I.E.; *b.* 20 June 1857; *S.* 1875; *Address:* Sirohi, Rajputana.

SITAMAU, H. H. SIR RAJA RAM SINGH, RAJA OF, K.C.I.E.; *b.* 1880; descended from Rathor House of Kachi Baroda; *Educ.:* Daly Coll., Indore. Hindi and Sanskrit poet, and keen student of science and ancient and modern philosophy. *S.* by selection by Govt. of India in default of direct issue, 1900. *Address:* Sitamau.

SLATER, JOHN SANDERS, B.A., Bar-at-Law: Admr.-Genl. of Bombay and Official Trustee; *b.* 21 March 1859; *Educ.:* Royal Naval School, New Cross; Trinity Hall, Cambridge. Called to Bar at Inner Temple, 1882; admitted Advocate, Bombay Bar, Feb. 1887. Joined Bombay Vol. Arty :elected to and granted commission 1888; Ag. Prof. of Hist. and Pol.Econ. Jan. 1888; Govt. Prof. of Law (Senior),Dec. 1889; March 1895; Ch. Presy. Magte. and Rev Judge, Bombay, April 1894, Sept. 1905. Admr.-Genl. of Bombay and Official Trustee of Bombay, Sept. 1905: Sp. duty with Home Dept., Govt. of India, Aug-October 1910. App. Official Liquidator of Lakhmidas Khimji S. & W. Co., Ltd. and Indian Specie Bank, Ltd. *Address:* Byculla Club, Bombay.

SLOCOCK, FRANCIS SAMUEL ALFRED, C.I.E., *Educ.:* Marlborough; Trinity Coll., Oxford, Ent .I.C.S., 1889; served Madras and C.P.. Ch. Sec.- Ch. to Commsr. 1906; Inspr.-Genl; of Police, C.P. 1908-14 Sp. duty, Govt. of India, Home Dept., 1914-16. Ch. Sec. to Ch. Commsr., C. P. and Addl. Mem., Imp. Leg. Council. *Address:* Nagpur.

SLY, SIR FRANK GEORGE, K.C.S.I.; Commsr., Nagpur. *Educ.:* Balliol Coll., Oxford. Ent. I.C.S., 1885; Insp.-Gen. of Agric., 1904-05; Mem. of Roy. Commsn. on Indian Services 1912. Mem. of Franchise Committee (Reforms Scheme 1918-19.

SMITH, REV. GEORGE HERBERT, M.A. (Oxon); Prin. of S.P.G. Theological Coll., Madras; Sec. of Madras Diocesan Committee of S.P.G., since 1901; Hon. Canon of St. George's Cathedral, Madras, since 1910; Incumbent of St. Thomas' Church, San Thome, Madras; *b.* 31 Aug. 1871; *Educ.:* Richmond Sch., Yorks; Queen's Coll., Oxford. *Address:* Sullivan's Gardens, Royapettah, Madras.

SMITH, LT.-COL. JOHN MANNERS, V.C., C.I.E., C.V.O.; Pol. Dept., Govt. of India; Ch. Commsr., Ajmer-Merwara; *b.* Lahore, 30 Aug. *Educ.:* Trin. Coll., Stratford-on, Avon; King Edward VI. Sch., Norwich;

Sandhurst. Ent. Army, 1883; admitted Pol. Dept. 1887; accompanied Sir Mortimer Durand on Missions to Sikkim, 1888, and Kabul, 1893; held Pol. appointments in Kashmir, Bundhelkand, Baluchistan, Rajputana, and Nepal. 1889-1913; served in N.-W. F. Exp.; capture of Nilt Position (V.C.); *Address:* Ajmer.

SORABJI, CORNELIA; Legal Adviser to Purdahnishins, Court of Wards, Bengal, Behar and Orissa, and Assam, and Consulting. Counsel. *Educ.:* Somerville Coll. Oxford; Lee and Pembertons, Lincon's Inn Fields, London; Bachelor of Civil Law, Examination Oxford, 1893; obtained special privileges, Lincoln's Inn, London, 1903; propounded in 1902 scheme, to India Office, for connecting Lady Counsel with Prov. Exec. Govts. of India; in 1904 app. by Govt. of Bengal to position she now holds. *Address:* Board of Revenue, Calcutta.

SPENCER, HON. MR. JUSTICE CHARLES GORDON, I.C.S.; Puisne Judge of Madras High Court, since 1914; *b.* 23 Feb. 1869. *Educ.:* Marlborough; Keble Coll., Oxford; Lincoln's Inn. Ent. I.C.S., 1888; *Address:* Weston, Haddows Road, Nungumbaukum, Madras.

SPRING, HON. SIR FRANCIS JOSEPH EDWARD, K.C.I.E., C.I.E.; Mem., Madras Council, M.A.I., *honoris causa* and L.C.E., Trinity Coll. Dublin; late Mem. of Council of Inst of Civ. Engrs; is Mem. of Inst. of Mech. Engrs.; and of American Soc. C.E.; Chairman and Ch. Eng. of Madras Port Trust; Consult. Eng. to Port of Chittagong; *b.* 20 Jan. 1849. *Educ.:* Middleton Sch. Co. Cork; Trinity Coll., Dublin. Ent, Ind. Govt. Eng. Service, 1870. *Publications:* has written on technical education on light railways of local interest, and on the training and control of great rivers. *Address:* Madras.

STANDEN, BERTRAM PRIOR, C.I.E.; Commsr, Bihar Div., C. P., since 1915; *b.* 1867; *Educ.:* Uppingham. Trinity Coll. Camb. Ent. I.C.S., 1886 Ch. Sec. to Ch. Commsr. 1908-11; Mem., Prov. Leg. Council. *Address:* Amraoti.

STEIN, SIR AUREL, K.C.I.E., Ph.D., D.Litt. (Hon. Oxon.), B. Sc. (Hon. Camb.); Supdt. Indian Archaeological Survey on special duty; *b.* Budapest, 26 Nov. 1862; *Educ.:* Budapest and Dresden; studied Oriental Languages and Antiquities at Vienna and Tübingen Universities and in England. App. to I. E. S. as Prin. of Calcutta Madrasah, 1899; carried out archaeological explorations for Indian Govt. in Chinese Turkestan, 1900.—and in C. Asia and W. China, 1906-08; transferred to Archaeological Survey, 1909; carried out geographical and archaeological explorations in C. Asia and Persia, 1913-16. *Address:* Srinagar.

STEPHENSON, L.-COL. JOHN, I.M.S., Prin., Govt. Coll., Lahore, since 1912; *b.* Padham, Lancs, 1871; *Educ.:* Burnley G. S. Manchester Univ. B.Sc. (Lond.) 1890; M.B., Ch. B., (Manch.) 1893; M.B. (Lond.) 1894; F.R.C.. (Eng.) 1905; D.Sc. (Lond.) 1909; F.R.S.E. 1912; joined I.M.S., 1895. *Address:* Lahore.

STEPHENSON, HUGH LANSDOWN, C.I.E., I.C.S.; *b.* London, 8 Apr. 1871. *Educ.:* Westminster; Christ Church, Oxford. Ent. I.C.S., 1895; Sec. to Board of Rev. Calcutta; Fin. Sec. to Govt. of Bengal.; Addl. Sec., Pol. Dept. *Address:* Writers' Buildings, Calcutta.

STEVENS, LT.-COL. CECIL ROBERT, I.M.S., M.D., B.S., Lond., F.R.C.S. Eng.; Prof. of Clinical and Operative Surgery, Medical Coll., Calcutta; *b.* 14 Mar. 1867. *Educ.:* Malvern; Univ. Coll., London; St. Bartholomew's. *Address:* 5, Middleton Street, Calcutta.

STEVENSON-MOORE, CHARLES JAMES, C.V.O., I.C.S.; Mem. of Board of Rev. Bengal, since 1914; *b.* 1866; *Educ.:* Felsted Sch. Essex; Emmanuel Coll., Camb. Joined I.C.S., 1885; Ch. Sec., Govt. of Bengal, 1910; Mem., Prov. Leg., Council. since 1915.

STEWART, ALEXANDER CARMICHAEL, M.V.O. Dy. Insp.-Gen., Indian Police, since 1909. *Educ.:* privately. *Address:* Simla.

STEWART, SIR FRANCIS HUGH, KT., C.I.E., M.A., (Oxon.); partner in Gladstone, Wyllie and Company, Merchants, London and Calcutta; *b.* Nov. 1869. *Educ.:* Harrow; Magdalen Coll., Oxford. Amateur Golf Champion of India, 1897; Pres., Bengal Chamber of Commerce, 1915; Mem. of Bengal Council, 1911-12, 1914; Imp. Council, 1915; Sheriff of Calcutta, 1914. *Address:* 5, Council House Street, Calcutta.

STILL, CHARLES, C.I.F.; Indigo Planter; *b.* 1849. *Educ.:* privately. *Address:* Sathi Factory, Chumparun.

STIRLING, GEORGE CLAUDIUS BERESFORD, C.I.E.; Supdt. and Pol. Officer, S. Shan States, since 1910; *b.* 1861; Ent. Burma Pol. Dept., 1888. *Address:* Taunggyi, S. Shan States, Burma.

STOKES, HOPETOUN GABRIEL, C.I.E., B.A.; Dy. Sec., Govt. of India, Fin. Dept., 1911-13; Fin. Mem., Imp. Delhi Committee, 1913-15; Priv. Sec. to Gov. of Madras, 1915. Pol. Ag., Banganapelle, Madras; *Educ.* Clifton; Oriel Coll., Oxford. Ent. I.C.S. 1895. *Address:* c-o Binny & Co., Madras.

STONE, SIR JOSEPH HENRY, KT., C.I.E., M.A.; Dir. of Publ. Inst., Madras, since 1914; *b.* 9 June 1858. *Educ.:* King's Coll., Camb. Ent. I.E.S. 1886; Prin., Presy. Coll., Madras, 1907-12. *Address:* The Mansion, Nungambakam, Madras.

STONEY, EDWARD WALLER, C.I.E., M.E., M.I.C.E.; M. Inst. C.E.; late Ch. Eng. of Madras Ry. (retired), 1904; Fellow, Madras Univ. *Address:* The Gables, Coonoor.

STRANGMAN, THOMAS JOSEPH, B.A., LL.B. (Cantab.); Adv. Genl, Bombay; *b.* 7 January 1873; *Educ.:* Charterhouse and Trinity Hall, Cambridge. Called to Bar at Middle Temple, 1896; admitted as Adv. of Bombay H.C. 1896; acted as Ch. Presy. Magte., Bombay, from June 1901 to May 1902; acted as Admr. Genl. and Official Trustee, Bombay, May 1902 to Nov. 1903; Adv. Genl, Bombay, Oct. 1906 to April 1915 and from Nov. 1916. *Address:* Malabar Hill, Bombay.

STREET, Lt.-Col. Ashton, M.B., F.R.C.S.; Prin. and Prof. of Surgery, Grant Medical Coll.; Dean of Faculty of Medicine, Bombay Univ. *b.* 1864; *Educ.:* Downing Coll. Cam. *Address:* Grant Medical College, Bombay.

STRINGFELLOW, Henry Parker; Manager, Bank of India, Ltd., Bombay; *b.* 22 Sept. 1862; *Educ.:* Brighton G.S. London and County Bank, Lombard Street, London, 1882-1890; Alliance Bank of Simla, Ltd., 1890-1906; and Manager, Bank of India, Ltd., since 1906. *Publications:* Notes on Banking Practice in India. *Address:* Nepean Sea Road, Malabar Hill, Bombay.

STUART, Louis, I.C.S.; 1st Add. Jud. Commsr., Oudh since 1914; *b.* 12 March 1870; *Educ.:* Charterhouse; Balliol Coll. Oxford. Ent. I.C.S., 1891; Jud. Sec. to Govt. and nom. as Mem. of U.P. Council, 1910-12. *Address:* Lucknow.

STUART, Murray, D.Sc. (Birm.), B.Sc. (Lond.), F.G.S., F.C.S.; Geol. Sur. of India, since 1914; Prof. of Geol. in Poona Coll. of Engng., Bombay, in addition to other duties since June 1916; *b.* 5 Nov. 1882. *Educ.:* King Edward's H. S., Birmingham, and Birmingham Univ.; I.E.S., as Prof. of Geol., Presidency Coll., Madras, 1911-14. *Address:* Poona.

STUART, Maj.-Gen. Sir Robert Charles Ochiltree, K.C.S.I., C.S.I.; Mem. Ind. Munitions Board since 1917; *b.* 22 Aug. 1861. *Educ.:* Woolwich. Ent. R. A., 1880; I. O. D., 1889; Dir. Gen. of Ordnance, India, 1911-17. *Address:* Forest Hill, Simla.

SUBRAMANIA IYER, Sir Subbayyer, K.C.I.E.; retired Judge of Madras High Court; *b.* 1842. *Address:* Beach House, Mylapur, Madras.

SUDBOROUGH, Prof. John Joseph, Ph.D., D.Sc., F.I.C.; Prof. of Org. Chem., Ind. Inst. of Sc.; *b.* Birmingham, 1869. *Educ.:* King Edward's Sch. Camp Hill, Birmingham; Mason Coll. Birmingham; Univ. of Heidelberg; Owen's Coll., Manchester, D.Sc. London, Late Prof. of Chem. and Dean of Fac. of Sc. Univ. Coll. of Wales, Aberystwyth. *Address:* Bangalore.

SUKHIA, Dr. Nadirshaw H. E., L.M. & S. L.V. Sc. (Spl.); F.R.S.I., (Lond). Mun. Councillor (1901); J.P. (1911); Hon. Presy. Magte. (1913); Del., the Parsi Chief Matrimonial Court (1916). Physician and Sanitarian; *b.* 26 May 1860; *Educ.:* Bombay; Univ. Medl. Examr., Bombay Univ. 1895; Lecturer in Anatomy and Physiology, Govt Vet. Coll; Con. Vet. Surgn.; Assist. Surgn., Indian Medical Service; Med. Officer in charge of H. H. ex-King Theebaw of Burma and Suite and Ag. Civil Surgn., Ratnagiri; Mem., Standing Committee Bombay Mun. Corp. (1911 to 1918); *Address:* Sukhia Buildings, Cowasji Patel Street, Bombay.

SUNDARLAL, Hon. Pandit, Rai Bahadur, C.I.E.; Adv., Allahabad High Court; Mem. U.P., Council, since 1895; Fellow of Univ. of Allahabad, since 1889; *b.* May 1857. *Educ.:* Muir Central Coll., Allahabad; Calcutta Univ.; Vice-Chancellor, Allahabad Univ., 1906-08 and 1912-16; reappointed, 1916; Jud. Commsr. of Oudh 1909; Judge, Allahabad High Court, 1914; reappointed 1916; Mem., Imp. Council, 1915; first Vice-Chancellor Benares Hindu Univ. 1916. *Address:* 9 Elgin Road, Allahabad.

SUNTH, Maharana Sri Jorawarsinhji Gulabsinghji, Raja of; *b.* 24 March 1881; *S.* 1896; *Address:* Sunth, Kantha.

SUTHERLAND, Lieut.-Col. David Waters. C.I.E., I.M.S.; Prin. and Prof. of Medicine, Med. Coll., Lahore, and Dean, Med. Fac., Punjab Univ. *b.* Australia, 18 Dec. 1871. *Educ.:* Melbourne and Edinburgh Univ. M.D., Edin. M.B., C.M. Edin. M.R.C.P., Lond., F.R.S., Edin., Fell.; Roy. Soc., Med., London. *Address:* Egerton Road, Lahore.

SYED, Sir Ali Imam, K.C.S.I., C.S.I., was Law Mem. of Viceroy's Council; *b.* 11 Feb. 1869. Called to Bar, Middle Temple, 1890. *Address:* Patna.

TAGORE, Abanindra Nath, C.I.E.; Vice-Prin. Govt. Sch. of Art, Calcutta, since 1905; Zemindar of Shazādpur, Bengal; *b.* 1871. *Educ.:* Sanskrit Coll., Calcutta, and at home. Designed Memoral Address to Lady Curzon; Casket presented to King by Corp. of Calcutta, 1911; principal work consists in reviving School of Indian Art. *Address:* 5, Dwarkanath Tagore's Lane, Calcutta.

TAGORE, The Hon. Maharaja Bahadur Sir Prodyot Coomar, Kt.; *b.* 17 Sept. 1873. *Educ.:* Hindu Sch., Calcutta; afterwards privately: Sheriff of Calcutta, 1909; Trustee Victoria Mem. Hall; Trustee, Indian Museum; Mem. of Asiatic Soc. of Bengal; Mem., Bengal Council. *Address:* Calcutta.

TAGORE, Sir Rabindranath, Kt., D.Lit. (Calcutta Univ.); *b.* 1861; *Educ.:* privately. Lived at Calcutta first; went to country at age of 24 to take charge of his father's estates; there he wrote many of his works; at age of 40 founded school at Shantiniketan, Bolpur; this has been his life-work ever since; visited England, 1912, and translated some of his Bengali works into English; Nobel Prize for Literature, 1913. *Publications:* In Bengali—about 30 poetical works, and 28 prose works, including novels, short stories, essays, sermons, dramas, etc. In English—Gitanjali, The Gardener, Sādhanā, The Crescent Moon, Chitra, The King of the Dark Chamber; The Post Office, a Play, 1914; Fruit-Gathering; Nationalism, 1917. *Address:* Shantiniketan, Bolpur.

TASADDUK RASUL KHAN, Raja Sir, K.C.S.I.; Taluqdar of Jahangirabad, Mem. of U.P. Council; Mem. B. I. Assoc., Oudh; *Address:* Bara Banki.

TATA, Sir Dorabji Jamsetji, Kt., J.P., sen. partner, Tata Sons & Co.; *b.* 27 Aug. 1859; *s.* of late Jamsetji Nusservanji Tata, *m.* 1898, Meherbai, *d.* of H. J. Bhabha. *Educ.:* Caius Coll., Camb; Bombay Univ. *Address:* Waudby Road, Bombay.

TAVEGGIA, Rt., Rev. Santino; Bishop of Krishnagar, since 1906; *b.* Italy, 1855. Went to India, 1879. *Address:* Krishnagar.

SAW SEIN KO, C.I.E., I.S.O., Supdt., Archæological Survey, Burma Circle; Exmr. in Chinese, Burma, since 1906; *b.* 7 Dec. 1864; *Educ.:* Christ's Coll., Camb; Burmese and Pali Lecturer, Rangoon Coll., 1882-85; Asst. Sec. to Govt. of Burma, 1885-92; Burmese Lecturer, Cambridge, 1892-93. *Address:* Mandalay.

SEGART, CHARLES AUGUSTUS, C.I.E., M.V.O.; Indian Police; officiated as Dy. Insp.-Gen. of Police, Calcutta; *b.* 1881; *Educ.:* Portora Royal Sch., Enniskillen; Trinity Coll., Dublin. Joined Indian Police, 1901.

SEHRI, H. H. RAJA NARENDRA SHAH SAHAB BAHADUR, of Tehri-Garhwal State; *b.* 3 Aug. 1898. Succeeded 1913. *Educ.:* Mayo Coll., Ajmere, *Address:* Tehri-Garhwal State.

SHACKERSEY, SIR VITHALDAS DAMODHER, Kt., J.P.; millowner; *b.* 1 Dec. 1873; *Educ.:* Elphinstone Coll., Bombay; controls five of largest cotton mills in Bombay; Mem. of Bombay Council, 1903-10; Pres. of Bombay Corp., 1907; Chairman of Millowners' Assoc.; Pres. of Industrial Confce., Calcutta, 1906; Dir. of many Joint-Stock Companies; Mem. of Imp. Council; 1910-13. *Address:* Mahaluxmi, Bombay.

SHAKUR, RAO BAHADUR KASHINATH KESHAR, I.S.O.; Sen. Div. and Sess. Judge, Nagpur, since 1911; *b.* 15 Feb. 1860. *Educ.:* Sangor and Jubbulpore H. S.; Muir Central Coll., Allahabad. *Address:* Nagpur.

SHOMSON, HERBERT, C.S.I.; I.C.S., Burma; *b.* 2 Oct. 1870. *Educ.:* St. Peter's Sch., York; Trinity Coll., Cam.; App. I.C.S. 1889; has held appointments as Ch. Sec. to Govt. of Burma, and Fin. Commsr., Burma. *Address:* Rangoon.

SHORNTON, HUGH AYLMER, C.I.E., B.A., I.C.S.; Supdt. N. Shan States, since 1909. *Educ.:* Cheltenham; Christ Church, Oxford (B.A.). Ent. I.C.S., 1895. *Address:* The Residency, Lashio, N. Shan States.

SHULRAI, TALUQDAR OF, RANA SIR SHEORAJ SINGH BAHADUR OF KHAJURGAON, K.C.I.E.; Rai Bareli District; *b.* 1865; *m.* 1st, *d.* of Babu Amarjit Singh, *y. b.* of the Raja of Majhonli; 2nd, *d.* of Raja Somesurdatt Singh, a Raja of Kundwar; 3rd, *d.* of the Raja of Bijapur District. *Educ.:* Govt. H. S., Rai Bareli. *S.* father, 1897; descended from King Sahvahan, whose Sumvat Era is current in India. *Heir:* Kunwar Lal Eima Natti Singh Bahadur. *Address:* Thulrai, Khajurgaon.

SINNEVELLY, BISHOP OF, since 1915, RT. REV. EDWARD HARRY MANSFIELD WALLER, M.A. (Cantab.); *b.* 8 Dec. 1871. *Educ.:* Highgate Sch. Corpus Christi Coll.; Cam., Ordained 1894; Principal, St. Paul's Divinity Sch., Allahabad, 1903; Sec., C.M.S., Indian Group, 1913; Canon of Lucknow, 1910-15. *Address:* Bishopstone, Palamcotta.

SOLLINTON, HENRY PHILLIPS, C.I.E., I.C.S.; Dy. Commsr., Lahore, since 1909. *Educ.:* Lamington Coll., Balliol Coll., Oxford. Ent. I.C.S., 1893. *Address:* Lahore.

TOMKINS, HERBERT GERARD, C.I.E., F.R.A.S.; Acct.-Gen., Bengal; *b.* 21 April 1869. *Educ.:* privately. Joined Fin. Dept. of Govt. of India, 1891. *Address:* 9, Riverside, Barrackpore.

TOMKINS, LIONEL LINTON, C.I.E.; Dy. Insp.-Genl. of Police, Punjab, since 1914; Ent. India Police Dept. in 1891; *Address:* Lahore.

TONK, H. H. AMIN-UD-DAULA WAKIRUL MULK NAWAB SIR MUHAMMAD IBRAHIM ALI KHAN BAHADUR SAULAT JANG, G.C.I.E., G.C.S.I.; *b.* 1848; *S.* 1867. State has area of 2553 sq. miles and population of over 270,000. *Address:* Tonk.

TRAVANCORE, H. H. SIR BALA RAMA VARMA, MAHARAJAH OF, G.C.I.E., G.C.S.I., M.R.A.S., Officer de l'instruction Publique; *b.* 25 Sep. 1857; *S.* 1885. State has area of 6730 sq. miles and population of 3,000,000. *Address.* Travancore.

TRAVANCORE AND COCHIN, SOUTH INDIA, BISHOP OF, since 1905, RT. REV. CHARLES HOPE GILL, M.A., D.D.; *b.* 11 Feb. 1861. *Educ.:* St. Edmund's Sch., Canterbury; King William's Coll., Isle of Man; Queen's Coll. and Ridley Hall, Cambridge. *Address:* Kottayam.

TROTTER, HON. JUSTICE VICTOR MURRAY COUTTS, M.A.; Puisne Judge of Madras High Court, since 1915; *b.* 12 May 1874; *Educ.:* St. Paul's Sch.; Balliol Coll., Oxford; called to Bar (Inner Temple), 1901; joined N. E. Circuit, 1902. *Address:* High Court, Madras.

TUDBALL, HON. JUSTICE WILLIAM, ; Puisne Judge, Allahabad High Court, since 1909; 15 Mar. 1866. *Educ.:* Bedford Mod. Sch.; Christ Church, Oxford. I. C. S. 1885; Add. Jud. Commsr., Oudh, 1908. *Address:* 27, Stanley Road, Allahabad.

TURNER, Dr. JOHN ANDREW, M.D., D.P.H., (Cantab.), C.I.E., 1916; Kaiser-i-Hind Gold Medal. Executive Health Officer, Bombay, *b.* Sept. 1858; *m.* Vera Margaret Lambert. *Educ.:* King's School, Sydney; Edinburgh University; London and Paris. Formerly M. O. H. Leicester and Rutland County; M. O. H. Hertfordshire and East Herts and Essex. *Publications:* Sanitation in India; History of Plague in Bombay; Tuberculosis in India. *Address:* Queen's Mansions, Bombay.

TWEEDY, GEORGE ALFRED, I.C.S.; Mem. of Board of Rev. U.P., since 1911; Mem. of U.P. Council; *Educ.:* King's Coll., London. Ent. I.C.S., 1879; Commsr. of a Division, 1903. *Address:* Allahabad.

TWOMEY, SIR DANIEL (HAROLD RYAN)' I.C.S.; Judge, Chief Court, Rangoon, since 1909; *b.* 1864. *Educ.:* St. Stanilaus' Coll., Tullamore; Univ. Coll., London. Ent. I.C.S., 1882; called to Bar, Middle Temple, 1895; Sec. to Govt. 1897; Commissioner, 1905. *Address:* Rangoon.

TYABJI, Husain Badruddin, M. A. (Honours), LL.M. (Honours), Cantab. 1896; Bar-at-Law. Ag. Second Judge, Bombay Court of Small Causes; *b.* 11 October 1873; *m.* Miss Nazar Mohammad Fatehally. *Educ.:* Anjuman-e-Islam, Bombay; St. Xavier's School and College; Downing College, Cambridge. Practised in the Bombay High Court. *Address:* Almanzil, Malabar Hill, Bombay.

UDAIPUR, H. H. Maharajah Maharana Sir Fateh Singh, Bahadur of, G.C.S.I., G.C.I.E., *b.* 1848. *Address:* Udaipur.

UDAIPUR, H. H. the Raja of, Chandrashekar Prasad Singh Deo, Chief of. *Address:* Udaipur.

ULLAH, Ven. Ihsan; Archdeacon of Delhi; Achdeacon in Lahore Diocese, since 1910, and Supdtg. Missionary of Toba Tek Singh Mission; *b.* 1857; *Educ.:* Baring H. S., Batala; Lahore Div. Coll. *Address:* Holy Trinity Church, Lahore.

VEIRA DE CASTRO, Rt. Rev. Teotonio Manoel Ribeiro, D.D.; R.C. Bishop of Mylapur, since 1899; *b.* Oporto, 1859. *Educ.:* Gregorian Uni., Rome. *Address:* San Thome, Madras.

VENIS, Arthur, C.I.E., M.A., D.Litt.; *Educ.:* Edinburgh Univ.: Balliol Coll., Oxford; Fell. of Asiatic Soc. of Bengal and of Univ. of Allahabad. Ent. I. E. S., 1881; Prin. Sanskrit Coll., Benares, 1888; Queen's Coll., Benares, 1897; Prof. of Post-Vedic Sanskrit, Univ. of Allahabad, 1914. *Address:* Govt. Sanskrit Library, Benares.

VENKATASWERA CHALAPATI RUNGA-RAO BAHADUR, Maharajah Sir Ravu, Maharajah of Bobbili, G.C.I.E., K.C.I.E., Maharajah, 1900; Ancient Zemindar of Bobbili; *b.* 28 Aug. 1862. *Educ.:* Bobbili, privately. Ascended Gaddi in 1881; Vice-Pres. of Madras Landholders' Assocn. Life Mem., Royal Asiatic Soc.; Mem. of Madras Council, 1896, 1898, 1900, and 1902; First Native Mem. of Madras Exec. Council, 1910-11. *Address:* Bobbili, Madras Presidency.

VERRIERES, Albert Claude, C.I.E.; Supdtg. Eng., P.W.D., since 1916. *Educ.:* St. Peter's Coll., Agra; Roorkee. Ent. P.W.D., 1893; Under-Sec. to Govt. P.W.D., Naini Tal, 1912-14; Exec. Eng., Dehra Dun, 1915-16. *Address:* Fyzabad.

VINCENT, Frank Arthur Money, M.V.O., King's Police Medal; Commissioner of Police, Bombay City; *b.* 23rd October, 1875. *m.* Helen Trevor-Roper; *Educ.:* Dulwich College, and City and Guilds Technical Coll. Joined Indian Police, 1895; Superintendent of Police, 1904; Principal, Police Training Sch.: Deputy Commissioner, C.I.D., Bombay; Deputy Director, Central Intelligence with Government of India; Commissioner of Police, 1916. *Address:* Ridge Road, Malabar Hill, Bombay.

VINCENT, Sir William Henry Hoare, Kt.; Mem. of Viceroy's Exec. Council, 1917; *b.* 1866; *Educ.:* Christ Coll., Brecon; Trinity Coll., Dublin. Ent. I. C. S., 1887; served in Bengal in various capacities, offi. as Judge, Calcutta High Court, 1909 and 1910; Sec. in Leg. Dept., Govt. of India, 1911-15; Mem. Exec. Council, Bihar and Orissa, 1915-17.

VISVESVARAYA; *see* Mokshagundum.

VOLKERS, Robert Charles Francis, C.I.E.; Sec. Railway Board, 1907-13; Accountant, P. W. D., since 1878; Examiner, 1894. *Address:* Calcutta.

WACHA, Sir Dinsha Edulji, Kt.; *b.* 2 Aug. 1844; *Educ.:* Elphinstone Coll., Bombay. In Cotton Industry, since 1874; for 31 years served Bombay Mun. Corp., (President, 1901-02); for 28 years Mem. Bombay Mill-owners' Assoc. Committee, since 1889, and Bombay Imp. Trust since its formation in 1898; Pres. of 17th National Congress, Calcutta, 1901; and of Belgaum Prov. Conference, 1897; gave evideuce before Royal Commission on Indian expenditure in 1897; Trustee of Elphinstone Coll.; also Chairman, Indian Merchants' Chamber and Bureau. *Publications:* pamphlets on Indian Finance and Economics, Agricultural Condition of India, Railways, Currency, Temperance, etc.; large contributor to leading Indian newspapers and journals for the last 35 years. *Address:* Jiji House, Ravelin Street, Fort, Bombay.

WADDINGTON, Charles Willoughby, M.A., C.I.E., M.V.O., I.E.S.; Tutor to H. H. the Maharajah of Jodhpur; Prin., Mayo Coll., Ajmer, 1903-18; *b.* 29 Dec. 1865. *Educ.:* Charterhouse; Oriel Coll., Oxon., *Address:* Mayo Coll., Ajmer.

WADIA, Jamsetjee Ardaseer, J. P., 1900; Merchant; *b.* 31 Oct. 1857; *Educ.:* Elphinstone Sch. and Coll, and served apprenticeship in Dickinson Akroid & Co. of London; Promoter and Director of Cotton and other industrial concerns: Member of Bombay Mun. Corpn., since 1901. *Publications:* Writer on Industrial and Economic subjects; published two pamphlets against closing of the Mints. *Address:* Wilderness Road, Malabar Hill, Bombay.

WALKER, Major George Kemp, C.I.E. Fell. of Royal Coll. of Vet. Surgs.; Major, I. C. V. D., Supdt. C. V. D., Bombay, *b.* 20 March 1872; *Educ.:* Warwick Sch.; R. V. C., London. Joined A. V. D., 1894; transferred to Civil, 1897; *Address:* Poona.

WALKER, Gilbert Thomas, MA., C.S.I., F.R.A.S., Sc.D., F.R.S.; Dir. Gen. of Indian Observatories, since 1904; *b.* 1868; *Educ.:* St. Paul's Sch.; Trinity Coll., Camb. (Senior Wrangler, 1889); Fell. 1891; Math. Lecturer, 1895. *Address:* Meteorological Office, Simla.

WALKER, Sir James, K.C.I.E., C.I.E.; Commsr., Nagpur; Add. Mem., Imp. Council, 1913; *b.* 1864. *Educ.:* Aberdeen Univ.; Balliol Coll., Oxford. Served in executive branch of I.C.S., in Madras and C.P. *Address:* Nagpur.

WALLIS, Sir John Edward Power, Hon. Justice, Kt., M.A.; Chief Justice, Madras, since 1914; *b.* Nov. 1861. Called to Bar, Middle Temple, 1886; Adv. Gen., Madras, 1900-07; Vice Chancellor, Madras Univ., 1908; Puisne Judge, 1907-14. *Address:* High Court, Madras

WALMSLEY, HUGH, M.A., I.C.S.; Judge, Calcutta High Court, since 1915; *Educ.:* Merton Coll., Oxford. Ent. I.C.S., 1893; *Address:* High Court, Calcutta.

WALSH, ERNEST HERBERT COOPER, C.S.I., I.C.S.; *b.* 7 March 1865. *Educ.:* Trent; Univ. Coll., London; Middle Temple; Commsr, Burdwan Div., 1904; Bhagalpur Div., 1907; Mem., Imp. Council, 1912 and 1914; Commsr., Chota Nagpur Div., 1912; Mem., Royal Asiatic Soc. and Asiatic Soc. of Bengal. *Address:* Ranchi.

WANKANER CAPTAIN MAHARANA SRI, SIR AMARSINHJI, RAJ SAHEB OF, K.C.I.E.; *b.* 4 Jan. 1879; *S.* 1881; *Educ.:* Rajkumar Coll. State has area of 425 sq. miles, and population of 32,653. Salute, 9 guns. *Address:* Wankaner.

WARBURTON, JOHN PAUL, C.I.E.; *b.* 28 Aug. 1840. Joined Pol. Dept., Punjab, 1864; Asst. Insp. Gen., Railway Police, 1894; retired, 1900. *Address:* Gilbert House, Kasauli.

WARD, ARTHUR WILLIAM, M.A.; Prof. of Physics, Canning Coll. Lucknow, since 1889; *b.* Waterloo, 1 Aug. 1858. *Educ.:* Liverpool Coll.; Liverpool Inst.; St. John's Coll., Camb.; Fell. and Mem. of Syndic, Allahabad Univ. Mem. of Senate, Benares Hindu Univ., 1916. *Address:* Badshah Bagh, Lucknow.

WARD, THOMAS ROBERT JOHN, C.I.E., M.V.O.; *Educ.:* Framlingham Sch., Cooper's Hill. Ent. P. W. D., 1883; on dep. with Seistan Boundary Commission, 1902-06; Engineer, Delhi Durbar, 1911; Engineer to Home Dept., Govt. India, for selection of site for new capital, Delhi, 1912; services lent for 18 months to King of Siam to inaugurate irrigation works in Valley of Menam Chao Phaya; Ch. Eng. and Sec. to Punjab Govt., 1915; Mem., Punjab Council, 1915; F.R.G.S., M.I.C.E.; M.A.M.C.E. *Address:* Lahore.

WARNE, RT. REV. FRANCIS WESLEY; Missionary Bishop to India, since 1900; *b.* 30 Dec. 1854. *Address:* Inayat Bagh, Lucknow.

WATHEN, GERARD ANSTRUTHO, M.A.; Prin., Khalsa Coll., Amritsar, since 1915; *b.* 28 Dec. 1878. *Educ.:* St. Paul's Sch.; Peterhouse, Camb.; Bonn; Paris. App. to I.E.S., 1905; Insp. of Chiefs' Colleges in India, 1909; Dean of Fac. of Arts, Punjab Univ., 1913-14. *Address:* Khalsa College, Amritsar.

WATSON, CHARLES CUNINGHAM, C.I.E.; Commsr., Ajmer-Merwara; *b.* 1874; *Educ.:* Edinburgh Univ.; Christ Church, Oxford. Ent. I.C.S., 1897; Priv. Sec., Gov. of Bombay, 1909-12; Sec. to Govt. of Bombay, Pol. and Jud. Dept. 1912-14. *Address:* Ajmer.

WATT, REV. JOHN, M.A., D.D., F.C.S.; Prin., Scottish Churches Coll., Calcutta; *b.* 1862. *Educ.:* Parish Sch., Methlick; Gram. Sch., Old Aberdeen; Aberdeen Univ.; New Coll., Edinburgh. Joined Duff Coll., Calcutta, 1888; *Address:* 4, Cornwallis Square, Calcutta.

WEBB, HON. M. DE P., C.I.E.; Founder of The War League of India; Chairman, Karachi Chamber of Commerce; *b.* Clifton, 1869; *Educ.:* privately. Engaged in mercantile pursuits. *Address:* Karachi.

WEBSTER, JOHN EDWARD, C.I.E., I.C.S.. Dy. Commsr., Sylhet, Assam, since 1912; *b.* Ranchi, 3 Sept. 1871. *Educ.:* Charterhouse; Trinity Hall, Cam.; Ent. I.C.S., 1891. *Address:* Sylhet.

WESTCOTT, RT. REV. G. H.; *see* Lucknow Bishop of.

WHEELER, SIR HENRY, K.C.I.E., C.I.E., C.S.I., I.C.S.; Mem., Exec. Council, Bengal, since 1917. *Educ.:* Christ's Coll., Cam. Ent. I.C.S., 1891; Dy. Sec., Govt. of India, Fin. Dept., 1907-08; Sec., Royal Commission on Decentralisation, 1908-09; Fin. Sec., Govt. of Bengal, 1909-12; Home Sec., Govt. of India, 1912-16.

WHITE, MAJOR FREDERICK NORMAN, C.I.E., M.D.; Asst. Dir.-Gen., I.M.S. (Sanitary), 1914; Sanitary Commsr., Govt. of India, Simla. *Address:* c-o Grindlay, Groom & Co., Bombay.

WHITTY JOHN TARLTON, C.I.E.; Manager, Bettiah Raj under Court of Wards; *Educ.:* Clifton Coll.; New Coll., Oxford; Univ. Coll., London. Ent. I.C.S. 1898; *Address:* Champaran.

WILLIAMS, CAPT. HERBERT ARMSTRONG, D.S.O., I.M.S.; Resident Medical Officer, Rangoon General Hospital, since 1907; *b.* 11 Feb. 1875. *Address:* General Hospital, Rangoon.

WILLIAMS, SYDNEY CHARLES, M.A., (Cantab.); B.A. (London). Vice-Chairman, Calcutta Port Commissioners; *b.* 9 May 1876; *Educ.:* Kingswood Sch.; Bath, Univ. Coll., Aberystwyth and Trinity Coll., Cambridge. Priv. Sec. to Sir Edward Holden 1900; Junior Sec. to Agent, E. I. Ry., 1900-03; Dy. Sec. to Agent, E. I. R. 1903-06; Secy. to Agent, E. I. R. 1906-14; Sec. Port Commissioners, Calcutta, 1914-16; Vice-Chairman, 1916. *Publications:* The Economics of Railway Transport, 1909; Article on Indian railways in Modern Railway Practice, 1913. *Address:* Port Commissioner's House, Calcutta.

WILLINGDON, 1st Baron, of Ratton, *cr.* 1910. FREEMAN FREEMAN-THOMAS; Governor of Bombay, 1913-18; Governor Designate of Madras. *b.* 12 Sep. 1866; *m.* 1892, Hon. Marie Adelaide, *d.* of 1st Baron Brassey; one *s.* A.D.C. to Lord Brassey when Gov. of Victoria, 1895; M.P. (L.) Hastings, 1900-1906; Bodmin, Div. of Cornwall, 1906-10; Jun. Lord of Treasury, 1905-12; Lord-in-Waiting to H. M. *Heir: s.* Hon. Inigo Brassey Freeman-Thomas, *b.* 25 July 1899. *Clubs:* Bachelors', Brooks.

WILLIS, GEORGE HENRY, C.I.E., 1918; M.V.O.; Major, R.E., M.I. Mech. E., J.P.; Master of Mint, Bombay; *b.* 21 Oct. 1875; *Educ.:* St. Paul's Sch., London; R.M.A., Woolwich. R. E. 1895; Major, 1914. Arrived India, 1900; Deputy Mint Master, 1907; officiated as

Mint Master till October 1915. Bombay representative of Indian Advisory Committee to Council of Institution of Mechanical Engineers. *Address:* H. M. Mint, Bombay.

WILSON, CHARLES HENRY, C.I.E.; Agent of Hong-Kong and Shanghai Banking Corporation, Bombay, and Mem. of Bombay Council; formerly Mem., Burma Council, *b.* 22 Oct. 1858. *Address:* Bombay.

WILSON, NEVILLE FREDERICK JARVIS, C.M.G., C.B.E., Offg. Director, R.I.M.; *b.* 2nd Jan. 1865; *Educ.:* Gosport Military Academy. Merchant Service, 1878 to 1887; R.I.M. thence to date. *Address:* Marine House, Govt. Dockyard, Bombay.

WINDHAM, LT.-COL. CHARLES JOSEPH, C.I.E.; Resident in Western States of Rajputana, since 1910; *b.* 1867; Ent. Army, 1886; Indian Pol. Service, 1893; Pol. Officer with Ex-Amir Yakub Khan of Kabul. *Address:* The Residency, Jodhpur.

WINN, GILBERT FRANKLYN, I.S.O.; Registrar, Home Dept., Govt. of India, since 1912; *b.* 1866. *Educ.:* Muir Central Coll., Allahabad. *Address:* Simla.

WITHERS, LIEUT. EDGAR CLEMENT, C.I.E., R.I.M.; Intelligence Officer, Persian Gulf. *Address:* Intelligence Department, Basra.

WODEHOUSE, LT.-COL. FREDERIC WILLIAM, C.I.E., I. A.; Bombay Pol. Dept., Resident, Kolhapur and Pol. Agent, S. Mahratta Country States; *b.* 7 April 1867: *Educ.:* Westminster; Sandhurst. Joined Army, 1886; *Address:* The Residency, Kolhapur.

WOOD, HON. SIR JOHN BARRY, K.C.I.E., C.S.I.; Pol. Sec., Govt. of India, since 1914; late Resident, Indore; *b.* 1870. *Educ.:* Marlborough; Balliol Coll., Oxford. Ent. I.C.S., 1893; Under-Sec. to Govt. of India, Foreign Dept., 1899-1903; 1st Assist. in Baluchistan, 1903. Dy. Sec., Foreign Dept., 1906-10. *Address:* Ava Lodge, Simla.

WOOD, WALTER GUNNELL, A.M.I.C.E., C.S.I.; Prin., Thomason C.E., Coll., Roorkee, since 1916; *b.* 19 Oct. 1861. *Educ.:* Wellington; R.I.E. Coll. Ent. P.W.D., 1882: Supdt. Eng., 1905: Ch. Eng. and Sec. to Govt., U. P., 1912-16. *Address:* Roorkee.

WOODROFFE, JUSTICE SIR JOHN GEORGE, Kt., Puisne Judge, Calcutta High Court, since 1904; *b.* 15 Dec. 1865. *Educ.:* Woburn Park; Univ. Coll., Oxford (B.C.L., M.A.). Barr., Inner Temple, 1889; Advocate, Calcutta H. C., 1890; Judge, 1904; Offg. Ch. Justice, Bengal, Nov. 1915. *Address:* 4 Carnac Street, Calcutta.

WOOLLCOMBE, REGINALD; Agent, B. B. & C. I. Railway; *b.* 27 Oct. 1858; *Educ.:* Taunton Coll. Sch.; R. I. E. C., Coopers Hill. Appointed to P. W. D., India. Arrived October 1882 and posted to construction of Swat River Canal. Transferred to R. M. Railway 1883: services leased to B. B. & C. I. Ry. from Jan. 1885. Retired on pension 1900, and remained in employment of B. B. & C. I. Ry, Co., as Asst. Eng., Dist. Loco. Supdt., Ch. Storekeeper and finally as Agent; Gazetted Captain in B. B. & C. I. Ry. Vol., 1885 and Major 1899; resigned 1906; reappointed Colonel commdg. the two Battalions 1912 and retired on formation of I. D. F. *Address:* The Ridge, Malabar Hill, Bombay.

WYNDHAM, PERCY, C.I.E., R.G.S.; Commsr. Kumaon, since 1914; *b.* 13 Dec. 1867. *Educ.:* Giggleswick Sch.; Queen's Coll. Oxford, M.A., Joined I.C.S., 1889. *Address:* Naini Tal.

YUSUF, SIR HADJI MUHAMMED, Kt. *Addrsess* Bombay.

CONTROL IN THE COTTON TRADE.

A crisis occurred in the cotton trade in Bombay in the early part of 1918, as a result of huge speculations in Good Broach cotton. It was a repetition in a severe form of trouble which had previously occurred and the high price to which cotton was forced. The difficulties of reaching an understanding between the bulls and bears at the annual Broach settlement in April were so acute that a proposal was made that Government should fix a settlement price. Government declined to do this but expressed their readiness to co-operate with the trade to prevent a recurrence of the trouble by taking action to restrict speculation. The immediate needs of the situation were met by the passing of the Defence of India (Cotton Contract) Rules, 1918, but this was a purely temporary measure and legislation in the Legislative Council took the place of the rules in October.

The conditions which rendered possible the occurrence of the crises last year were mainly two, the long period of the principal settlements and the narrow basis of the contract. The remoteness of the time of settlement led to speculation to an extent which was not necessarily correlated in any way to the resources of the parties; while the custom of requiring performance of a contract in the particular variety of cotton contracted for led to great fluctuations of rates, especially as speculative contracts were frequently made in respect of a particular variety of which the crop is small in quantity. The chief remedies required by the situation were, therefore, the substitution of short-term for long-term settlements and such regulations of the conditions of contract as would render possible a broadening of the basis of contract.

The Defence of India (Cotton Contract) Rules, 1918, proceeded on these lines. Some organisation (technically known as a "clearing-house") to facilitate the settlement of differences, and an authority with power to fix the market rates for settlement and generally to regulate matters ancillary to the foregoing, were also required and were provided for in the rules. A Cotton Controller having been appointed, with an representative advisory committee to assist him.

The legislation followed the rules in preferring the principle of nomination for the appointment of the controlling authority, the trade not being sufficiently organised to render any system of election feasible. The new Act consitituted the controlling authority, a corporation, in order to facilitate the holding of property and the transactions of the Cotton Contracts Board in general.

The Act is regarded as a temporary measure, pending permanent legislation in such form as the working of the Bill may show to be required The temporary measure became law on 9th December, 1918.

CONTROL OF COTTON CLOTH.

In view of the high price of cotton, which caused considerable distress to the poorer classes in India and led, in certain instances, to disturbances, the Government of Inda in March last, appointed an informal committee composed mainly of persons engaged in the cotton trade to consider what steps could be taken in the matter, and in particular (*a*) whether it would be possible to introduce a scale of mills charges for cotton cloth, and if such a scale was possible, what it should be, and (*b*) whether it would be necessary for this purpose to control in any way the price of, or operations in, raw cotton, and if so, what steps were practicable in this direction.

The committee passed 15 resolutions. In this they declared that they thought it desirable that the price of cloth manufactured in India should not rise above a point justified by the price of raw cotton and other cost of manufacture allowing a reasonable margin of profit to the manufacturer, dealer and retailer. They thought that it would be difficult to regulate the price of all varieties of cloth and to ensure that the consumer would get the benefit of the prices so prescribed, but they considered that a fair measure of control would be practicable if a limited number of varieties of cloth were standardised or manufactured and sold under regulations. They recommended the appointment of a Central Committee in Bombay, to which Local Administration should give information with regard to the quantity of the ordinary sarees, dothies and long cloth required for the poorer classes. This Central Committee could prepare specifications and the obligation of manufacturng the cloth required would be distributed by some central authority as equitably as possibly among the mills.

The Government of India after giving their most careful consideraton to the Committee's recommendations agreed generally with their proposals for the standardisation of certain varieties of cloth. They agreed that it would be unnecessary and undesirable to place any restriction on the manufacture of hand-made cloth and they thought that it would also be undesirable, even if possible, to assume contro over imported cloth.

In order to give effect to the scheme for standardising cloth manufacture, Government prepared legislation taking power to appoint a Controller of Cotton Cloth, who should act in association with an advisory committee of persons with technical knowledge of the trade. it is decided that the Controller should be empowered to require the mills to manufacture certain kinds of cloth for which they will be paid at rates fixed so as to allow a reasonable margin of profit, the cloth so produced being retailed to the public at strictly controlled prices.

The Hon'ble Sir George Barnes, Member for Commerce and Industry, introduced a Bill in the Viceroy's Legislative Council on 4th September to inact the necessary measures and this, after considerable debate, and examination by a Select Committee, was passed into law on 26th September.

The immediate effect of the steps taken by Government was a heavy fall in piece-goods market. The cloth utilised by the poorer classes dropped from slightly under Rs. 4 per pound to less than Rs 1-2-0 per pound, that is, lower than the equivalent rate of raw cotton. Consequently, the need for the introduction of special measures of price control temporarily vanished and the Cotton Cloth Controller issued a communique stating that his powers for requiring production of standard cloth would not be exercised unless circumstances again necessitated them.

At the end of the year, cloth prices rose considerably, both in Bombay and in up-country markets, and reports showed that the full effect of the preceding fall in the price of cloth did not reach all parts, especially the outlying districts. This was particularly the case in Behar and Orissa and the Provincial Controller of Cloth of that Province made large purchases of Indian and Imported piece-goods in Calcutta at favourable rates, sold them quickly and, as more cheap cloth was unobtainable in the open market, applied to the Controller of Cotton Cloth for additional supplies. The Controller made a friendly arrangement with certain Bombay mills for the supply of the whole of the quantity required at Rs. 1-7-0 per pound free on rail, but as the demand for cheap cloth continued unabated and came freshly in from new parts of the country, the Controller advised the immediate application of the new Act and this step was accordingly taken on the 1st February, the mills being required to devote five per cent. of their looms for the production of standard cloth at the following rates per pound, free on rail:—

	Rs.	a.	p.
Shirting	1	7	6
Dhoties..	1	8	0
Saries	1	8	6
Shirting	1	5	6

The Calendars.

A full Calendar will be found at the beginning of this book. Below are given details of the other Calendars in use in India.

The *Jewish* Calendar is in accordance with the system arranged A.D. 358. The Calendar dates from the Creation, which is fixed as 3,760 years and 3 months before the beginning of the Christian Era; the year is Luni-solar.

The *Mohammedan*, or era of the Hejira, dates from the day after Mahomet's flight from Mecca, which occurred on the night of July 15, 622 A.D. The months are Lunar.

The *Fasli* year was derived from a combination of the Hejira and Samvat years by the order of Akbar; it is Luni-solar. The *Bengali* year seems also to have been related at one time to the Hejira, but the fact of its being Solar made it lose 11 days each year.

The *Samvat* era dates from 57 B.C., and is Luni-solar. The months are divided into two fortnights—*sudi*, or bright, and *badi*, or dark. Each fortnight contains 15 tithis, which furnish the dates of the civil days given in our calendars.

PUBLIC HOLIDAYS IN 1919.

Parsee (Shehenshahi).

Jamshedji Naoroz	March	21
Avan Jashan	April	18
Adar Jashan	May	17
Zarthost-no-diso	June	18
Gatha Gahambars	September	8
	,,	9
Parsee New Year	,,	10 & 11
Khordad Sal	,,	16 & 17

Parsee (Kadmi).

Avan Jashan	March	19
Jamshedji Naoroz	,,	21
Adar Jashan	April	17
Zarthost-no-diso	May	19
Gatha Gahambars	August	9 & 10
Parsee New Year	,,	12
Khordad Sal	Sept.	16 & 17

Mahomedan (Sunni).

Shab-e-Barat	May	16
Ramzan 'Id	July	1
Mohurrum	October	4
Bara Wafat	December	6
Mahim Fair	,,	8

Mahomedan (Shiah).

Shahadat-i-Huzrat Ali	June	20
Ramzan-Id	July	1
Bakri'Id	September	6
Mohurrum	October	4
Shahadat-e-Imam Husan	November	21
Bara Wafat	December	6
Id-e-Moulud		11

Hindu.

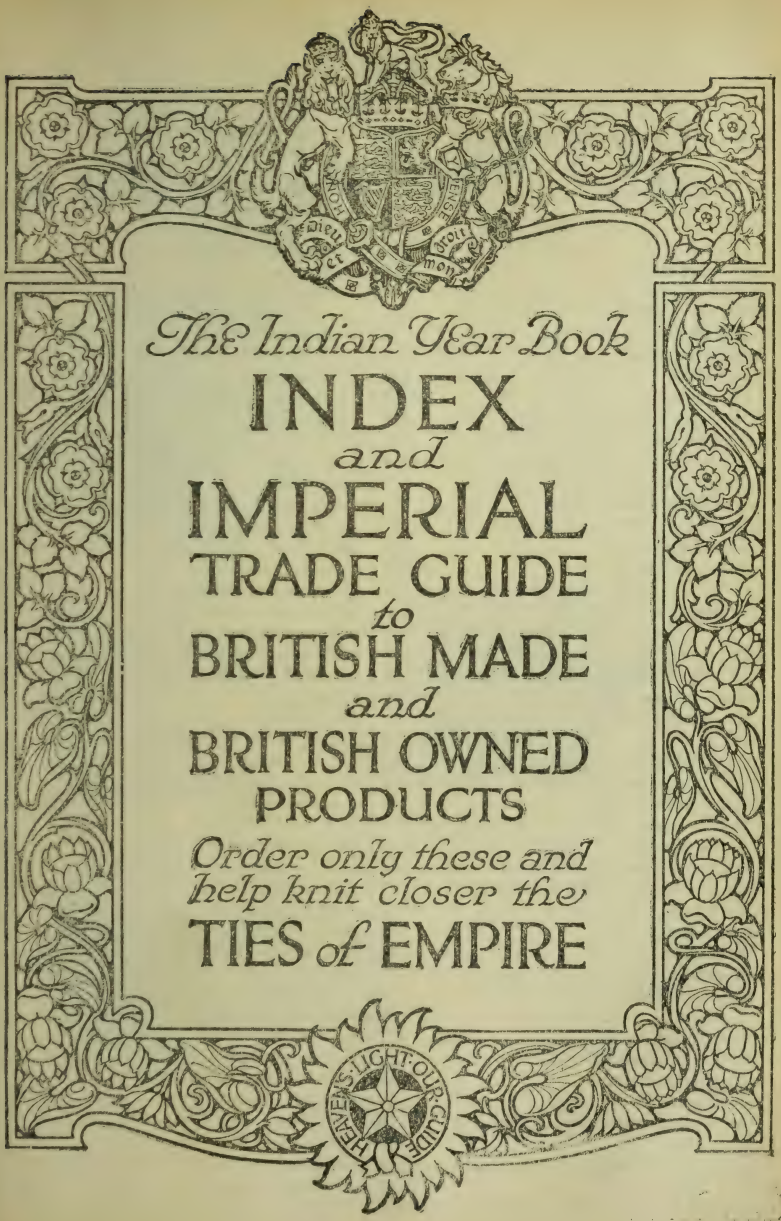
Makar Sankrant	January	14
Ramnavami	April	8
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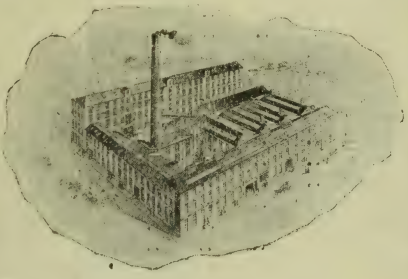
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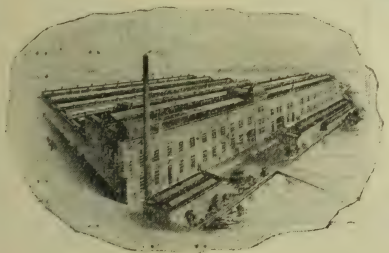
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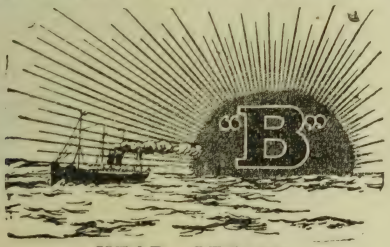
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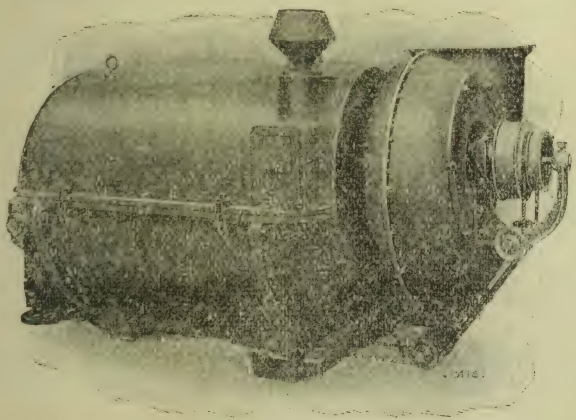
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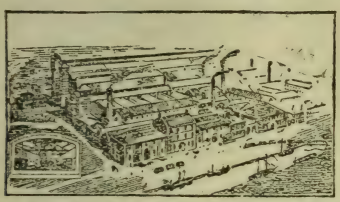
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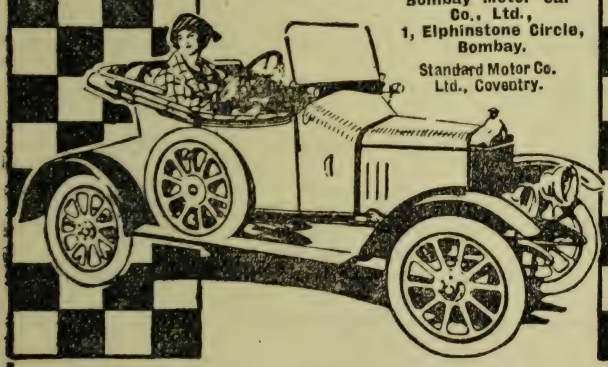
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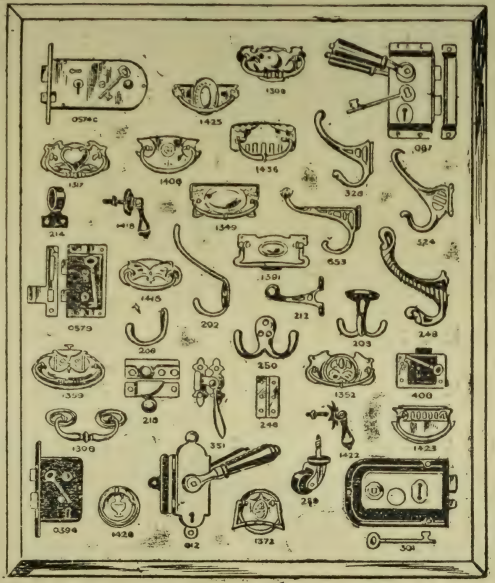
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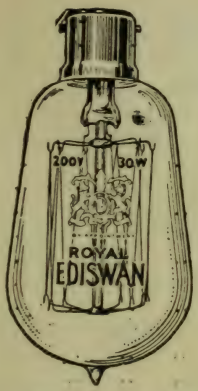
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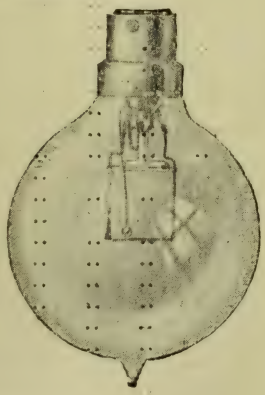
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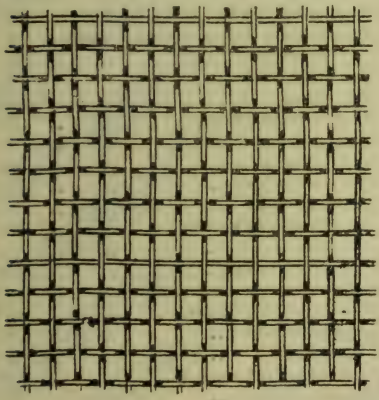
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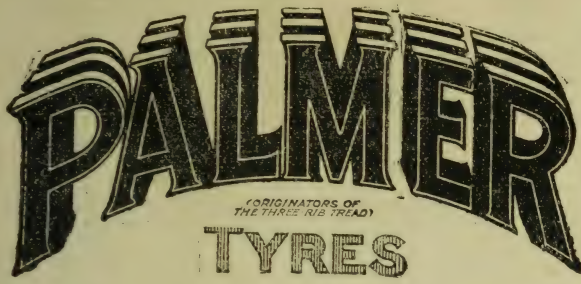
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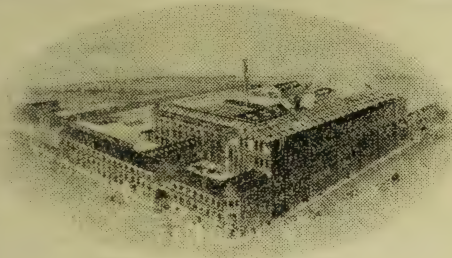
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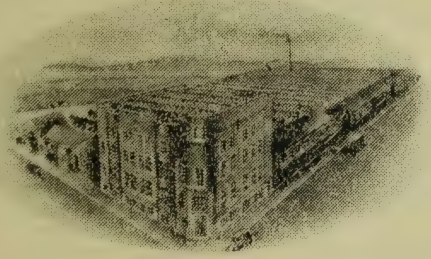
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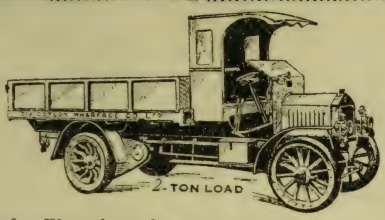
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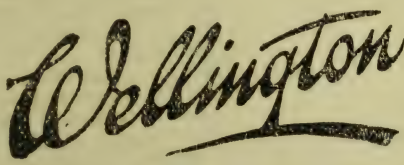
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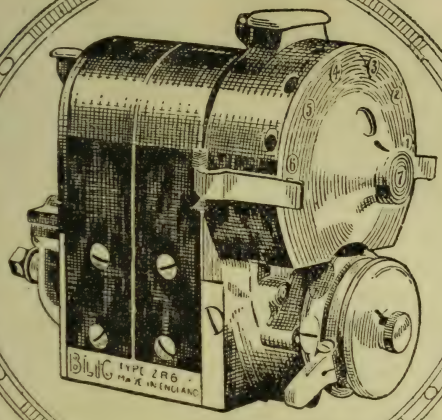
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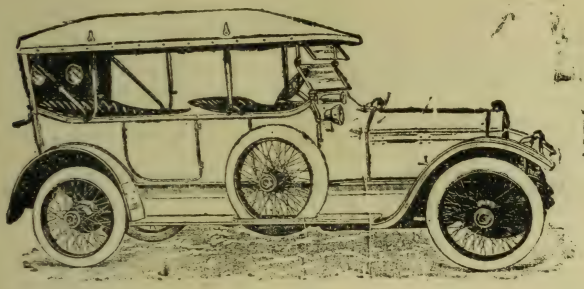
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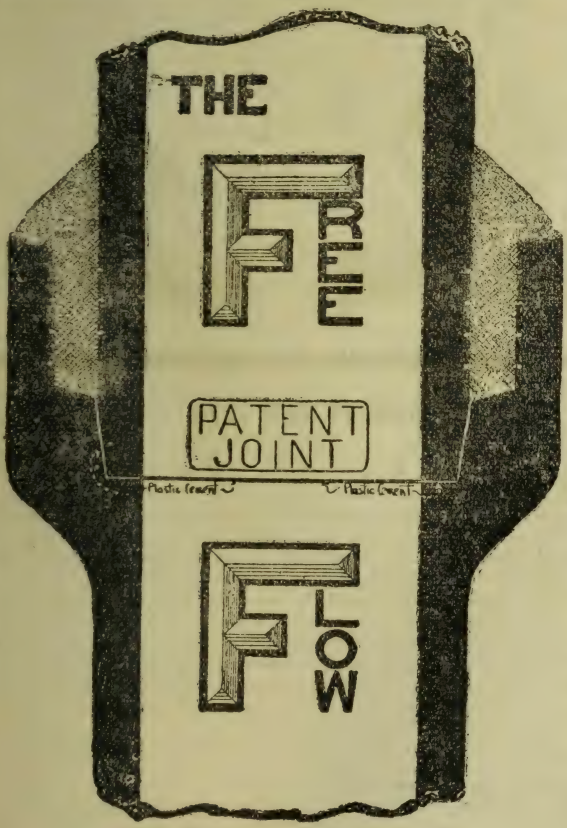
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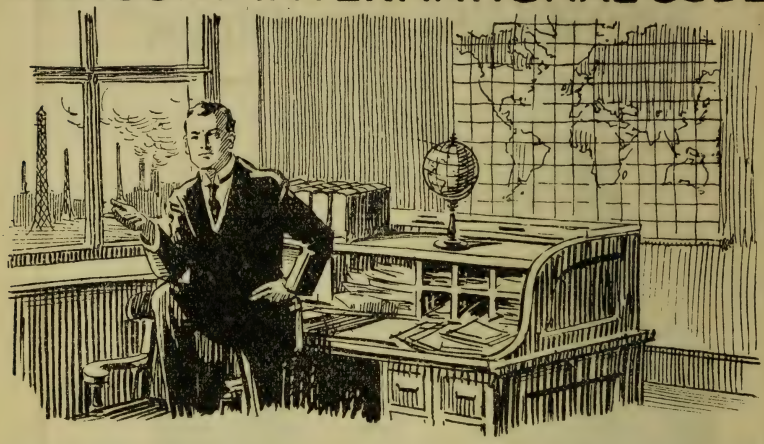
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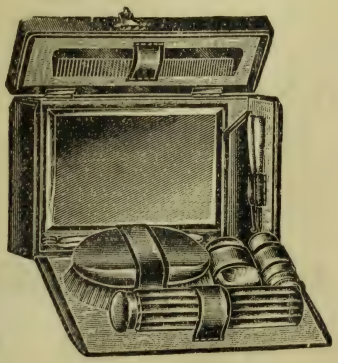
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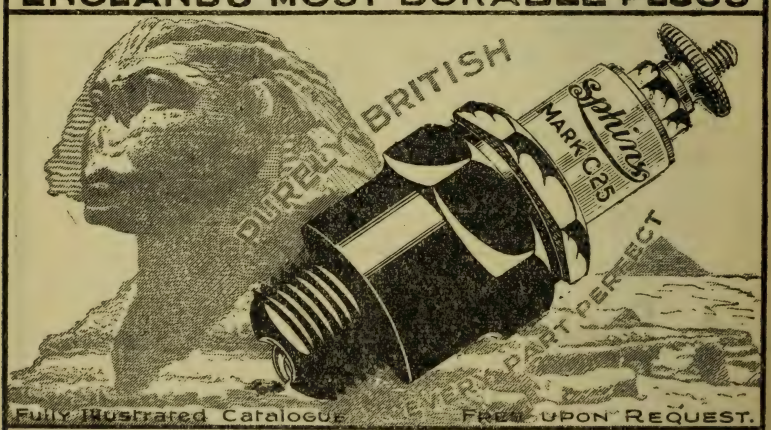
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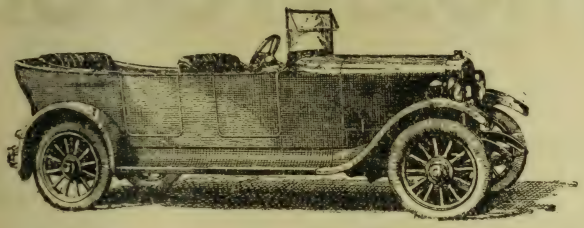
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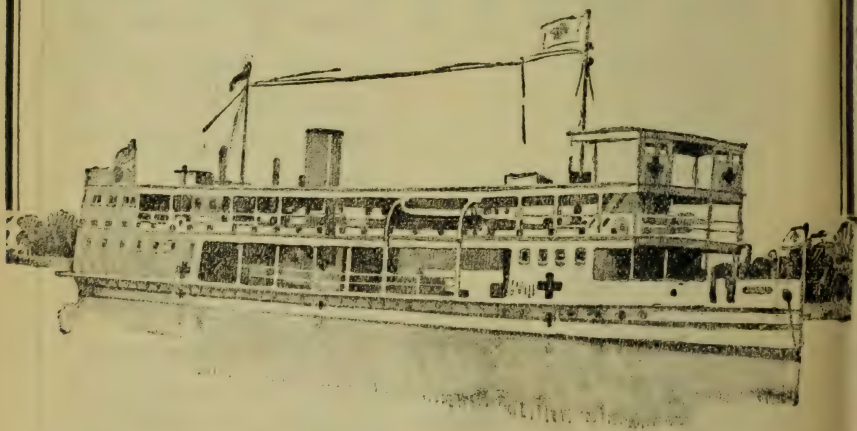
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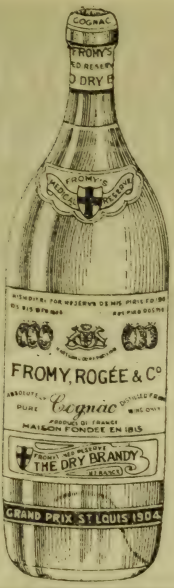
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